



UNIVERSITÉ FRANÇOIS - RABELAIS

DE TOURS



ÉCOLE DOCTORALE SCIENCES DE L'HOMME ET DE LA SOCIÉTÉ

THÈSE présentée par :

Barbara BARTOCCI

soutenue le : 02 octobre 2017

pour obtenir le grade de : **Docteur de l'université François - Rabelais**

Discipline/ Spécialité : Philosophie

**DIALECTICAL REASONING AND TOPICAL ARGUMENT IN THE
MIDDLE AGES : AN INQUIRY INTO THE COMMENTARIES ON
ARISTOTLE'S TOPICS (1250-1500)**

THÈSE dirigée par :

M. BIARD Joël

Professeur des universités, université
François-Rabelais de Tours

M. ROBIGLIO Andrea A.

Professeur, KU Leuven

RAPPORTEURS :

M. GRELLARD Christophe

Directeur d'études, École Pratique des
Hautes Études

M. FRIEDMAN Russell

Professeur, KU Leuven

JURY :

M. BIARD Joël

Professeur des universités, université
François-Rabelais de Tours

M. ROBIGLIO Andrea A.

Professeur, KU Leuven

M. GRELLARD Christophe

Directeur d'études, École Pratique des
Hautes Études

M. FRIEDMAN Russell

Professeur, KU Leuven

M. DE LEEMANS Pieter

Professeur, KU Leuven

Table of Contents

Introduction.....	5
Chapter One. Thinking visually. How did medieval men see dialectic?	9
Chapter Two. Dialectic in the Middle Ages. Before and after the recovery of Aristotle's Topics.....	37
2.1 "Della dialettica come dell'essere, πολλαχῶς λέγεται".....	37
2.2 Reading Aristotle's Topics. Some general issues concerning dialectic.	63
Chapter Three. What kind of pluralism of forms in syllogism?	81
3.1 Logical form and logical matters, dialectical form and dialectical matter: On some characteristic features of the earlier Parisian commentaries on the Topics.	81
3.2. The Notitiae supra librum Topicorum Aristotelis of Robert (A.7).....	87
3.3 A further step forward: Robertus Anglicus (A.10) and Adenulphus de Anagni (A.11).....	106
3.4 A look back and ahead: Albert the Great.	112
3.5 Logical form and logical matters: the descensus of the form into the matters.....	122
Conclusion	126
Chapter Four. Semantic topics: the Modistic mode of commenting on the Topics.....	129
4.1 The influence of new conceptions and paradigms of logic on commentators of the Topics.	129
4.2 Boethius of Dacia, Simon of Faversham and Radulphus Brito.	140
Conclusion	154
Chapter Five. "Legere tenetur libros omnes Topicorum". The puzzling case of the missing English manuscript tradition of the Topics.	157
5.1. Reading and commenting on Aristotle's Topics. Who read what and where?.....	157
5.2 The curious case of the disappeared British manuscript tradition of the Topics.....	161
5.3 Scotus and Burley: an independent English tradition?	168
5.4 Pseudo Bonaventure (A.4), the forerunner of English Commentators.	186
Conclusion	190
Chapter Six. A new perspective: John Buridan on the Topics.	193
6.1 Buridan on the subject matter of dialectic.....	193

6.2 Argumentatio in Buridan's Quaestiones Topicorum: illatio and probatio.....	200
6.3 Buridan's dialectic and its legacy.	209
Conclusion	213
Chapter Seven. In Albert's or Buridan's long shadow? Reading Aristotle's Topics in Fifteenth century schools.	215
7.1 15 th century schools of thought and the Topics.	215
7.2 Parisian Masters and the Topics.	217
7.3 The University of Cologne: Realism and the Topics.	222
7.4 At Leuven University: Teaching the unteachable.	225
7.5 The University of Cracow: Buridan's heritage in Poland.....	232
Conclusion	243
CONCLUSION	247
APPENDIX	253
Bibliography	255
Authors before 1500	255
Authors after 1500	261

Introduction

On the 30th April 1956, an important Florentine conference concluded, in which the most outstanding Italian historians of philosophy had convened to discuss the best method to adopt in doing History of Philosophy. In his closing speech, Mario Dal Pra offered some advice to the “filosofo storicista” who hoped to draw a faithful and useful picture of historical facts:

La dimensione del tempo, anche se le si toglie ogni integrazione ideale, è ben ricca per se stessa d’una varia complessità; si tratta appunto di ricostruire le dottrine nei loro vari legami, di studiare l’influsso ed i nessi d’una dottrina sulle altre, di configurare nella loro ampiezza le tradizioni, di cogliere le loro reciproche reazioni, di scorgere il nascere dei problemi della cultura [...] non si può fare storia della filosofia isolando [...] un autore dal clima storico in cui si è affermato; bisogna per contro ricercare e mettere in luce la più vasta complessità di legami e di raccordi, purché si tratti sempre di legami e di raccordi documentabili in modo rigoroso e non semplicemente dichiarati nell’atmosfera rarefatta della storia ideale.¹

As an aspiring “filosofo storicista”, I will try to apply these recommendations in my inquiry about the reception of Aristotle’s *Topics* in the Middle Age. For anyone wishing to delve deeper into this subject, the inevitable starting point is the unique monography addressing this issue, namely *The Tradition of the Topics in the Middle Ages. The Commentaries on Aristotle’s and Boethius’ ‘Topics’*, published by Niels Jørgen Green-Pedersen in 1984. If a scholar attempts to approach the tradition of the *Topics* without the guide of Green-Pedersen, he may well feel like a reader who finds himself in a huge library whose innumerable volumes are neither rightly ordered nor precisely catalogued. Despite its undeniable merits, Green-Pedersen’s reconstruction of the developments of the tradition of the *Topics* fails to address

¹ M. Dal Pra, “Del «superamento» nella storiografia filosofica”, in M. Dal Pra, *Storia della filosofia e della storiografia filosofica. Scritti scelti*, ed. by M. A. Del Torre, Milano: Franco Angeli, 1996, pp. 81-82.

several important elements, which are indeed fundamental to a more complete and nuanced picture. This shortcoming seems to be consequent on Green-Pedersen's choice to focus his inquiry on three general questions: "What do the medieval scholastic consider a locus to be? And in what context and by what means do they attempt to determine its nature? Second, how does a locus function in arguments and which species of arguments may occur in? Third, what classes are the loci divided into, and why?"²

In selecting which questions to pose to the Aristotelian commentators of the *Topics*, I have adopted an alternative perspective and committed myself to Collingwood's 'logic of question and answer': "anyone can understand any philosopher's doctrines if he can grasp the questions which they are intended to answer".³ Accordingly, I will endeavour to draw the medieval commentators' discussions about the *Topics* into a wider horizon. Indeed, I shall attempt to contextualise the different authors' views within the philosophical setting in which they were developed, in order to better identify the questions hotly debated during these Masters' lectures on Aristotle's text. Specifically, I will take into account the main views on logic and dialectic endorsed by commentators of different periods, in order to detect if and to what extent the adoption of different paradigms determined the authors' differing approaches to the *Topics*. Furthermore, I shall endeavour to understand whether the Aristotelian tradition of the *Topics* replaced the Boethian tradition or if, in some cases, the latter was welded together with the former, and what indeed were the effects of this union.

My analysis shall mainly focus on commentaries on Book One of the *Topics*, for this specific book was both lectured upon in many European Universities over the period considered in my analysis, and is preserved in almost all manuscripts of commentaries on Aristotle's work. Furthermore, Book One has both an introductory aim and a more theoretical nature than the remaining seven books. Since it discusses some key-notions of Aristotle's philosophy, it is the proper place to find the answers which Medieval commentators proposed to various philosophical and

² N. J. Green-Pedersen, *The Tradition of the Topics in the Middle Ages. The Commentaries on Aristotle's and Boethius' 'Topics'*, München: Philosophia Verlag, 1984, p. 137.

³ R. G. Collingwood, *An Autobiography*, Oxford: Clarendon Press, 2002, p. 55.

methodological issues, e.g. the questions about the status of dialectic, its methodology and the value of the argumentative strategies it employs, and about the relationship between dialectic and other disciplines.

This research would not have been possible without the support of many people, to whom I wish to express my sincerest gratitude. My 'Belgian' supervisor, Professor Andrea A. Robiglio, accompanied me in this adventure and provided me with more support than I deserved. My 'French' supervisor, Professor Joël Biard, made ever available his expertise in Medieval and Renaissance Philosophy. I would like to thank Professor Russell Friedman, for giving me the opportunity to conduct fruitful research on Peter de Rivo, and for his insightful comments on an early draft of the thesis. The support I received from my friend Serena Masolini, deserves more gratitude than I can here express. I also thank my friends Brian Garcia, who greatly helped me throughout this journey, and Charles Philip Tajtelbaum, who patiently edited my English. Gratitude is also due to the administrative staff and librarians at the Hoger Instituut voor Wijsbegeerte, who were always very kind and willing. Last but not least, my warmest thanks go to my beloved Gina, who is the *causa remota* of this thesis.

“Né tu finor giammai quel che tu stessa
Inspirasti alcun tempo al mio pensiero,
Potesti immaginar”

(G. Leopardi, *Aspasia*)

A Gina

Chapter One. Thinking visually. How did medieval men see dialectic?

Walking through the west portal of the cathedral of Notre Dame of Chartres, many sightseers, who are unversed in medieval culture, would not imagine that the sculpture of the woman holding a dog's head atop a serpent's body in her left hand and a flower in her right hand, carries a deeper message than might appear at first glance (*fig.1*). Nor will the iconographical meaning of the Florentine "Triumph of Saint Thomas Aquinas" be completely intelligible for the visitor to Santa Maria Novella who is not acquainted with the medieval intellectual world (*fig.2*).⁴

Leafing through the manuscript folios of Martianus Capella's *Nuptiae Philologiae et Mercurii* or of Convevole da Prato's *Regia Carmina*, the great majority of modern readers will encounter difficulties in reading not only the ancient handwriting, but also the illuminations. They will probably not be able to identify the woman wearing old-fashioned cloths, and grasping snakes in her hands. Reasonably enough only someone familiar with the culture and literature of the Middle Age will recognize this Lady as the personification of dialectic. This is because the "secondary or conventional meaning",⁵ which is implied by medieval visual artworks, has nowadays become obscure and almost unintelligible. In the Middle Ages and the Renaissance, however, this meaning was common knowledge among the cultured classes. Indeed, the learned observers were aware of the codified themes and concepts underlying iconographic subjects in the visual arts which were often conveyed through literary sources. Thus, educated medieval men would have been able to see beyond the mere visual meaning, and detect and to understand the symbolic elements of visual representations which intimate a deeper sense. In order

⁴ On the Florentine "Triumph of Saint Thomas Aquinas" see I. P. Grossi, " "Arti" e "Scienze" nel "Trionfo di s. Tommaso" di Andrea di Bonaiuto. Ipotesi di interpretazione", in *Memorie domenicane*, n.s. 8-9 (1977-1978), pp. 341-353.

⁵ I use Panofsky's categories of "primary" and "secondary meaning"; see E. Panofsky, "Iconography and Iconology: An Introduction to the Study of Renaissance Art", in *Id.*, *Meaning in the visual Arts. Papers in and on Art History*, Garden City (N.Y.): Doubleday Anchor Books, 1955, pp. 26-54, esp. pp. 28-29 and 39-41, originally in *Id.*, *Studies in Iconology: Humanistic Themes in the Art of the Renaissance*, Oxford: Oxford University Press, 1939.

to uncover the veiled connotations of the personification of dialectic, let us look through medieval lenses at some of its ancient visual representations, and read these images by thinking in symbols. This will be possible:

- 1) by carrying both a pre-iconographical and an iconographical description of such artworks: the iconographical description will illustrate how the iconographic subject of the artworks analysed in this chapter – namely dialectic and her identifying attributes – changed through the centuries;
- 2) by providing the iconographical interpretation of the iconographic subject: the identification of the literary sources on which the iconography of dialectic is based will disclose the “secondary or conventional meaning” conveyed by this allegorical figure and its associated symbols.⁶

Within the late-ancient educational system which was codified and used in the High Middle Ages, dialectic was one of the seven Liberal Arts. The disciplines comprising the *trivium* and the *quadrivium* (namely music, arithmetic, geometry and astronomy) played an instrumental role, and were primarily studied to better understand the Bible. Dialectic was part of the *trivium* along with the other disciplines concerned with language, namely grammar and rhetoric. Indeed dialectic was seen as the art dealing not only with dialogical encounters between opponents, but also with correct reasoning and the discernment of truth and falsehood. Thus it often overlapped with logic. In the Middle Age and modern period, indeed, *dialectica* was a polysemantic term. In its broader meaning it was used synonymously with logic.⁷ In its narrower or proper meaning, the word dialectic signified the discipline that through probable reasoning (*probabiliter arguere*) produces opinion. As such, dialectic was the inventive part of logic, which aims at discovering (*inventio*) principles as well as suitable middle terms of syllogism. As is well known, authors

⁶ Within the “special province of iconography” delineated here, we also encounter an element that could be understood as properly belonging to iconology. My iconographical interpretation will deal with the question of whether and to what extent philosophical and scholastic developments are reflected in and/or influenced the visual arts, particularly the representations of dialectic. I will leave aside the other elements usually taken into account in iconological analysis, such as “the influence of [...] political ideas; the purposes and inclinations of individual artists and patrons” (Panofsky, “Iconography and Iconology”, p. 32). One may also wonder if the influence between visual representation and philosophy was one-sided or rather mutual and reciprocal: Did visual arts sway philosophical writings?

⁷ See *infra* chapter 2.

disagreed on the actual nature of logic, the “ars artium ac scientia scientiarum”, and on its epistemological status. One such disagreement focused on whether logic should be considered an *ars* or a science (*habitus intellectualis*). The intrinsic ambiguity of the term dialectic is plainly elucidated in the threefold definition associated with *dialectica* which we find in the first edition of the *Lexicon Rationale sive Thesaurus Philosophicus* compiled by Étienne Chauvin. Here, the previous tradition is clearly embraced:

Dialectica: a Graeco *dialeghestai* derivatur. Variis autem modis verbum illud usurpatur. 1° Latissimè, pro omni usu rationis et orationis homini proprio: quo sensu Dialectica utramque logicam complectitur, ratiocinatricem scilicet, et sermocinatricem [...] Secundo. Ita accipitur *dialeghestai*, latine *disserere*, ut sit idem ac probabiliter disputare: quo modo Dialectica ea est tantum logicae vulgaris pars, quae dicitur topica. 3. Per tò *disserere* intelligitur *ignotum ex noto patefacere*; atque sic Dialectica idem prorsus est quod logica propriè dicta, quam artem ratione recte utendi definiunt; quippe ignotum ex noto patefit tum definiendo, tum dividendo, tum argumentando; sunt autem definitio, divisio, et argumentatio potissima instrumenta quibus mens dirigitur in suis operationibus.⁸

The Late ancient and Medieval organization of the disciplines constituting the teaching curriculum was reflected also in the visual arts. Artists often rendered through images descriptions found in literary sources.⁹ Thus let us briefly turn our

⁸ *Lexicon rationale sive thesaurus philosophicus ordine alphabetico digestus, in quo vocabula omnia philosophica, variasque illorum acceptiones, juxta cum veterum, tum recentiorum placita, explicare* [...], Rotterodami, apud Petrum van der Slaart bibliopolam, 1692. On the *Lexicon* see G. Gasparri, *Étienne Chauvin (1640-1725) and his Lexicon Philosophicum*, Hildesheim-Zürich-New York: Georg Olms Verlag, 2016.

⁹ The scholarship devoted to the iconography of the Liberal Arts is rather vast; see at least: P. d’Ancona, “Le rappresentazioni allegoriche delle arti liberali nel medio evo e nel Rinascimento”, in *L’arte*, 5 (1902), pp. 137-155, 211-228, 269-289, 370-385; L. H. Heydenreich, “Dialektik”, in *Reallexikon zur deutschen Kunstgeschichte*, vol. 3 (Stuttgart 1954), pp. 1389-90; A. Katzenellenbogen, “The Representation of the Seven Liberal Arts”, in M. Clagett - G. Post - R. Reynolds, *Twelfth-Century Europe and the Foundations of Modern Society*, Wisconsin - Madison: University of Wisconsin Press, 1966, pp. 39-55; P. M. Verdier, “L’iconographie des arts libéraux dans l’art du moyen âge jusqu’à la fin du quinzième siècle”, in J. Koch, *Arts libéraux et philosophie au moyen-âge. Actes du quatrième congrès international de philosophie médiévale, Institut d’Études Médiévales-Vrin, Montréal-Paris, 1969* pp. 305-354; A. Wirth, “Von mittelalterlichen Bildern und Lehrfiguren im Dienste der Schule und des Unterrichts”, in B. Moeller - H. Patze - K. Stackmann, *Studien zum städtischen Bildungswesen des späten*

attention to some texts which were particularly influent in this regard, in order to find some elucidation on the value and the concepts concealed by the symbolic attributes associated with Dialectic. As acknowledged by the great majority of scholars, Martianus Capella's *De Nuptiis Philologiae et Mercurii* was at the foundation of the iconography of the Liberal Arts, not only in illuminations, but in visual arts in general: "The bizarre figures born of the African imagination engraved themselves more deeply on the memory of the Middle Ages than did the purer creations of great masters, and until the Renaissance definite traces of their influence are seen in art [...] From that time onwards the poets were not fancy free when they set out to personify the Liberal Arts, for they could not forget the descriptions of the African rhetorician".¹⁰

The last seven books of Martianus' allegorical treatise, which was widely read in the High Middle Ages, provided detailed imageries of the female personifications of the Liberal Arts,¹¹ as well as precise descriptions of their individual symbols and the historical personalities accompanying each of them. The opening lines of the fourth book of the *De Nuptiis* portray a woman, clothed "with the dress and cloak of Athens", who is entering at the assembly of the gods. Despite her pallor – probably due her sleepless nights spent studying,¹² the lady appears "very keen-sighted":

Mittelalters und der frühen Neuzeit, Göttingen, 1989, pp. 256-370; J. Tezmen-Siegl, *Die Darstellungen der septem artes liberales in der Bildenden Kunst als Rezeption der Lehrplangeschichte*, Phil. Diss. Uni. München 1983, München 1985; M. Stolz, *Artes-liberales-Zyklen: Formationen des Wissens im Mittelalter*, 2 vols, Tübingen 2004. I was not able to consult M. Evans, "Allegorical Women and Practical Men. The iconography of the Artes reconsidered", in *Medieval Women. Studies in Church History. Subsidia* 1978, pp. 305-329 and W. E. Palmer, *Images of Knowledge: The Seven Liberal Arts and Their Representations in Medieval and Renaissance Art* (Ph.D. diss., California State University, Dominguez Hills, 2002).

¹⁰ E. Mâle, *L'art religieux du XIIIe siècle; étude sur l'iconographie du moyen âge et sur ses sources d'inspiration*, Paris: Leroux, 1898; I used the English translation: *Id.*, *Religious Art in France of the Thirteenth Century*, Mineola, N.Y.: Dover Publications, 2000, pp. 77 and 79; G. Nuchelmans, "Philologia et son mariage avec Mercure jusqu'à la fin du XIIe siècle", in *Latomus* 16 (1957), pp. 84-107.

¹¹ "From *De Nuptiis Philologiae et Mercurii* onward, personifications of the Liberal Arts were primarily women. That Capella assigned the female roles is probably due to the female gender of their Latin names [...] This tradition carried through the Renaissance" (V. Schonfeld, "Sebald Beham and The Iconography of the Liberal Arts", in P. Earenfight *et al.*, *Letters & Lines: Text and Image in Northern Renaissance & Baroque Prints*, Carlisle, Pa.: The Trout Gallery, Dickinson College, 2014, pp. 49-59, here p.51).

¹² Cf. the description of Philology in book 1, §37, p. 19: "The constant pallor that comes from her [scil. of Philology] studies at night"; in the opening lines of the fourth book, Aristotle is said to have grown "pale as he tortures himself in thought" (Martianus Capella, *The Marriage of Philology and Mercury*, Eng. tr. By W. H. Stahl – R. Johnson – E. L. Burge, in Martianus Capella, *Martianus Capella and the Seven Liberal Arts*, 2 vols., vol. 2 (Columbia University Press, New York: 1977), bk. IV, §327, p. 106).

her eyes constantly darted about; her intricate coiffure seemed beautifully curled and bound together, and descending by successive stages, it is so encompassed the shape of her whole head that you could not have detected anything lacking, nor grasped anything excessive [...] In her left hand she held a snake twined in immense coils; in her right hand a set of patterns carefully inscribed on wax tablets, which were adorned with the beauty of contrasting color, was held on the inside by a hidden hook; but since her left hand kept the crafty device of the snake hidden under her cloak, her right hand was offered to one and all. Then if anyone took one of those patterns, he was soon caught on the hook and dragged toward the poisonous coils of the hidden snake, which presently emerged and after first biting the man relentlessly with the venomous points of its sharp teeth then gripped him in its many coils and compelled him to the intended position. If no one wanted to take any of the patterns, Dialectic confronted them with some questions; or secretly stirred the snake to creep up on them until its tight embrace strangled those who were caught and compelled them to accept the will of their interrogator.¹³

This vivid image of Dialectic conceals many hidden meanings, and employs several technical logical words and abstract concepts, whose obscure senses were differently elucidated by exegetes. In Remy of Auxerre's Commentary on Martianus' text, which "influenced the iconography of the art as well as educational theory during the later mediaeval times",¹⁴ the paleness characterizing Lady Dialectic contrasts

¹³ *Ibid.*, §328, p. 107. "Pallidior paululum femina, sed acri admodum visu et vibrantibus continua mobilitate luminibus, cui crines tortuosi decentique inflexione crispatis et nexiles videbantur, qui tamen *deducti* per quosdam consequentes gradus ita formam totius capitis circulabant. ut nihil deesse cerneretur, nihil superfluum detineretur. cui quidem pallium Athenarumque vestitus, sed gestamen in manibus fuerat inopinatum ac prorsus gymnasiis omnibus inexpertum. in laeva quippe serpens gyrus immanibus involutus, in dextra formulae quaedam florentibus discolora venustate ceris sollerter effigatae latentis hami nexu interius tenebantur; sed quoniam eius laeva sub pallio occultabat insidias viperinas, cunctis dextera praebebatur; denique ex illis formulis si quis aliquam percepisset, mox apprehensus hamo ad latentis anguis virosos circulos trahebatur, qui tamen mox emergens primo spinosorum dentium acumine venenato assiduus hominem morsibus affligebat. dehinc ambitu multiplici circumactum ad condiciones propositas coartabat. si autem quamlibet formulam nullus vellet *assumere*, quibusdam obvios interrogatiunculis occupabat, aut latenter in eos anguem serpere stimulabat, donec nexilis *complexio* circumventos ad interrogantis arbitrium strangularet" (Martianus Capella, *De Nuptiis Philologiae et Mercurii*, ed. by J. Willis, Leipzig: Teubner Verlagsgesellschaft, 1983, pp. 106,15-107,11; Italics are mine).

¹⁴ Remigii Autissiodorensis *Commentum in Martianum Capellam. Libri I-II*, ed. by C. E. Lutz, Leiden: E. J. Brill, 1962 p. 48 fn. 35. Remy composed his commentary at the end of the ninth century, borrowing from older commentaries on that same text and thus offering a summary of the tradition preceding him. Also John Scotus Eriugena commented on Capella's *De Nuptiis*. On Remy's classification of the

with the more vivid skin tone of Grammar, and bespeaks the labor and difficulty of dialectic – “unde et dialectici macri et pallidi depinguntur”. The keen and dart eyesight of the Lady visually manifests the acumen of her mind. The hairstyle of the Lady reflects the manifold types of argumentation. In this logical perspective, the circularly wrapped coiffure represents the (chain of) syllogisms (*implexio syllogismorum*). The hair “bound together, and descending by successive stages” (*deducti*¹⁵ *per quosdam consequentes gradus*) symbolizes the conclusion of a syllogism, which follows from the perfect ordered disposition of the premises. And her tangled and woven hair of the lady allegorically represents fallacies and tantalizing propositions (*seductrices propositiones*) respectively. Remy’s interpretation implies the wider notion of dialectic understood as logic, namely as the discipline concerned with both correct reasoning and with captious arguments. Moreover, Remy stresses the sophistical component of dialectic, which was present in the Lady’s sensible imagery not only through the hair, but mainly through the serpent – an emblem of sophistical argumentation.¹⁶ Playing with the ambivalent sense of the word *involutus*, Remy parallels the snake, which is *involutus* or twined on the left hand of dialectic, with the *sophisticae calliditates* which are so *involutae*, namely obscure, that at times they lead to deception by inclining someone to concede false conclusions as true. Indeed, as we shall see in the iconographical excursus, the *formulae* held by the Lady in her right hand, were variously interpreted. Remy understands them as signs of simple propositions, and the hidden hook holding the *formulae* as the fallacious conclusion (*captiosa conclusio*). He deepens the elucidation of the whole passage in the light of the material components of syllogisms, and explicates that the *formulae* could signify the *propositio* –that is the major premise, and the hook could signify the

liberal arts see C. E. Lutz, “Remigius’ ideas on the classification of the seven liberal Arts”, in *Traditio* 12 (1956), pp. 56-86.

¹⁵ Remigius’ text of Martianus has *ducti*, instead of *deducti*; in the critical apparatus of the *De Nuptis* provided by Willis, *deducti* does not have any variant reading.

¹⁶ This clearly appears in Martianus’ text; a few lines after the above description he adds, through the mouth of Bromius/Bacchus, “the wittiest of the gods” and ignorant in logic: “She [*scil.* Dialectic] is so well recognized by snakes, and they show their fondness for her in their slimy way. Apart from this, we may deduce from that concealed hook that she is proven a most alluring charlatan” (Capella, *The Marriage*, § 331, p. 109). In Christian symbolism, the snake has often negative connotations being connected with Adam’s and Eve’s sin and the consequent fall; moreover, the serpent is the Devil (*Apoc.* 20.2-3), who “mendax est et pater eius [*scil.* mendacii]” (*John*, 8.44); see W. Menzel, *Christliche Symbolik*, vol. 2, pp. 325-332.

minor premise (*assumptio*) that leads to the necessary conclusion, which is in turn symbolized by the snake. These lines, Remy states, are a caveat for the opponent, who should carefully select the premises that he will concede (to the answerer), otherwise, willingly or not, he will be lead to a conclusion that contradicts his own position. In the high Middle Ages and even later, the iconography of the Liberal Arts in general, and of dialectic in particular, heavily relied on the portraits painted by Martianus in the *De Nuptiis*.¹⁷ Usually, the Seven Liberal Arts were depicted all together as allegorical female figures. Thus, Dialectic was often included in a larger allegorical program, which at times was not merely visual, but also philosophical¹⁸ and theological. The type of Lady Dialectic was characterized by some compositional and symbolic features that became the standard codification for her iconography. These compositional and symbolic elements are found in many of Medieval and Renaissance images of Dialectic produced all over Europe to decorate papal and royal graves, the rooms of private and public palaces, belfries, portals, pulpits, and rose windows of churches and cathedrals. And, obviously, the *folii* of manuscripts containing writings from various literary genres.

Like the other six Liber Arts, Dialectic was almost always characterized through specific individual traits that both visually express her peculiarities – such as the variety and subtleness of arguments, or her ambivalent status of a discipline encompassing both logic and sophistry. Most of time, the Lady was represented holding a serpent and a hook either a hooked stick in her left hand, and grasping tablets with her right hand. Since it was not always possible to faithfully translate into imageries Martianus' words, illuminators, painters or sculptors slightly departed from his description. This explains why frequently the hidden hook and, though more rarely, the *formulae* were replaced either by reptile-like dragons (fig.3-

¹⁷ On the influence of late ancient texts, like Capella's or Boethius' or Ysidore's *Ethymologiae*, on the development of ancient iconography of the Liberal Arts see Mâle, *L'art religieux*, pp. 87 foll.; Nuchelmans, "Philologia".

¹⁸ With regard to the representational tradition(s) of the Liberal Arts in the 12th century Katzenellenbogen affirms that "The representations of the Liberal Arts in miniature become sharply articulated and even develop into a whole philosophical system of a comprehensiveness and clarity not found until that time" (Katzenellenbogen, "The Representation", p. 39).

4)¹⁹ or lizards²⁰ – which were loaded with analogous allegorical overtone, or by a second snake (*fig.5*). From the iconographical perspective, the two snakes were attributes related to Hermes – two serpents entwine his caduceus – and medical art. However, from the philosophical perspective the two snakes tended to be related to dialectic in some way in late antiquity. In his letter *On Dialectic*, the Platonic philosopher Iamblichus advises his pupil Deuxippus that dialectic is a divine gift, in virtue of which men “discerned ambiguity and homonymy, and the ferreting out of every double meaning kindled in them the light of knowledge”. This discipline, claims Iamblichus, was revealed to humankind by some divinity, perhaps by “Hermes, the god of rational discourse, who bears in his hands its symbol, of two snakes looking toward each other”.²¹ Stobaeus repeated these same words in his widespread *Florilegium*: “Doctus Mercurius, qui manibus dialecticae symbolum gestat, nempe dracones se mutuo inspicientes”.²²

In general though, in medieval iconology tended to employ the serpent associated with Dialectic more to symbolized the peril implicit in the wrong use of logic and in sophistical reasoning, than in the whole discipline itself.

¹⁹ “Les Latins le [scil. Dragon] confondaient avec le serpent et employaient concurremment les mots « serpens » « anguis » et « draco » pour désigner soit un serpent, soit un dragon”. It was associated with logic or dialectic, prudence, *fortitudo*, the element of fire and Apollo (G. De Tervarent, *Attributs et symboles dans l'art profane: Dictionnaire d'un langage perdu (1450-1600)*, Genève: Droz, 1997², pp. 184-185).

²⁰ “Le serpent est un attribut normal de la Dialectique. Or le lézard a souvent les mêmes attributions que le serpent, sans doute à cause de leur ressemblance physique” (De Tervarent, *Attributs et symboles*, pp. 280-281); the lizard is the symbol “du ‘sorite qui s’insinue” (Verdier, “L’iconographie”, p. 335).

²¹ Letter 5: *To Dexippus, On Dialectic*, in Iamblichus of Chalcis, *The Letters*, Ed. by J. M. Dillon-W. Polleichtner, Atlanta: Society of Biblical Literature, 2009, p. 15. In the second book of the *Convivio* Dante associated the seven planets to the seven liberal Arts, and correlated dialectic with Mars: “E lo cielo di Mercurio si può comparare a la Dialettica per due proprietadi: che Mercurio è la più picciola stella del cielo, ché la quantitate del suo diametro non è più che di dugento trentadue miglia, secondo che pone Alfagrano, che dice quello essere de le ventotto parti una del diametro de la terra, lo quale è sei milia cinquecento miglia: l’altra proprietade si è che più va velata de li raggi del Sole che null’altra stella. E queste due proprietadi sono ne la Dialettica: ché la Dialettica è minore in suo corpo che null’altra scienza, ché perfettamente è compilata e terminata in quello tanto testo che ne l’Arte vecchia e ne la Nuova si truova; e va più velata che nulla scienza, in quanto procede con più sofisticici e probabili argomenti più che altra” (Dante Alighieri, *Convivio*, ed. by G. Fioravanti, in Dante Alighieri, *Opere*, Milano: Mondadori, 2014, vol. 2, II. Xiii, 8-11-12, pp. 312-313). As Fioravanti has pointed out (*Ibid.*, pp. 313-315), in this passage Dante equate dialectic with logic, precisely with the *logica antiqua* that comprises the *logica vetus* and the *logica nova*.

²² Iōannou Tou Stobaïou *Eklogai apophthegmatōn kai ypothēkōn* in Ioannis Stobaei *Sententiae ex thesauris Graecorum delectae*[...], ed. by Conrad Gessner, Basileae: ex officina Ioannis Oporini, 1549, Sermo 79 “de Literis”, p. 469.

Moreover, many Medieval artworks represented dialectic flanked by a man engaged in writing, who at times is identifiable as Aristotle, and others with Zoroaster. Indeed in some medieval traditions, the Stagirite was considered the father of dialectic, since he “brought the argumentative methods of this discipline under certain rules and named it ‘dialectic’ because in it one disputes about terms”.²³ On other accounts, dialectic was “brought up on an Egyptian crag and then had migrated to Attica to the school of Parmenides, and there [...] she had taken to herself the greatness of Socrates and Plato”.²⁴ This oriental origin of dialectic could have been the link between the discipline and Zoroaster.

A faithful visual transposition of Martianus’ narrative image of Dialectic decorates a manuscript, which contains Capella’s *De Nuptiis Philologiae et Mercurii* (fig.6), along with the commentary of Remy of Auxerre on it.²⁵ This is the most ancient illumination representing Dialectic in a manuscript of Martianus’ text, even though it seems to rely on an already established iconographical tradition. Against the

²³ “Dialectica est disciplina ad disserendas rerum causas inventa. Ipsa est philosophiae species, quae Logica dicitur, id est rationalis definiendi, quaerendi et disserendi potens. Docet enim pluribus generibus quaestionum quemadmodum disputando vera et falsa diiudicentur. Hanc quidam primi philosophi in suis dictionibus habuerunt; non tamen ad artis rede gere peritiam. Post hos Aristoteles ad regulas quasdam huius doctrinae argumenta perduxit, et Dialecticam nuncupavit, pro eo quod in ea de dictis disputatur” (Isidorus Hispalensis, *Etymologiarum sive Originum libri XX*, II.22; Engl. tr. in *Id., The Etymologies of Isidore of Seville*, ed. by S. A. Barney–W. J. Lewis–J. A. Beach–O. Berghof, Cambridge – New York – Melbourne – Madrid – Cape Town – Singapore – São Paulo: Cambridge University Press, 2006, p. 79).

²⁴ Capella, *The marriage*, IV, §330, p. 108 (*Id., De Nuptiis*, p. 107: “haec [scil. Dialectica] se educatam dicebat Aegyptiorum urbe atque in Parmenidis exinde gymnasium atque Atticam demeasse. illicque versipellis studii calumniante proposito etiam Socratis sibi Platonisque amplitudinem mancipasse”). See also Hugh of St. Victor, *Didascalicon* 3.2. 11-14, who however modified Capella’s account on the basis of Remy of Auxerre’s commentary, thus considering Parmenides as the inventor of dialectic: “Hic [Parmenides] philosophus fuit et primus apud Aegyptios artem dialecticam repperit. Erat autem solitus deserere divitates et conventus publicos et in hac rupe solus residere, ut liberius posset dialecticam meditari. Unde et a Parmenide rupes Parmenidis vocata est. Claret autem et hanc et alias artes apud Aegyptum repertas et ab his ad Graecos deductas” (Hugh of St. Victor, *Didascalicon* 3.14, Engl. tr. in *The Didascalicon of Hugh of St. Victor. A medieval guide to the Arts*, ed. by J. Taylor, New York – London: Columbia University Press, 1961, p. 98; cf. also 3. 4). See also John of Salisbury, *Metalogicon*, II.2. And see A.1, Robertus of Cilnacobi (A.1), *Notulae Topicorum*, book 1, lectio 1 (on *Topics* I.1): “Adhuc ponitur quod Parmenides invenit hec principia” (A.1, Robertus de Cilnacobi, Firenze, Biblioteca Nazionale Centrale, Conv. Soppr. B.4.1618, f. 95rb. On this topic see R. Klibansky, “The Rock of Parmenides: Medieval Views on the Origin of Dialectic”, in *Medieval and Renaissance Studies* I, 2 (1943), pp. 178-186).

²⁵ Paris, Bibliothèque Nationale de France, ms. Lat. 7900 A, f. 132v; the manuscript is thought to have been made between the end of the 9th century and the 10th century, probably at Fleury. Studies on the part of the ms., which contains Capella’s text, have been done by K. A. Wirth, “Eine illustrierte Martianus Capella-Handschrift aus dem 13. Jahrhundert”, in *Städte-jahrbuch* ns. 2 (1969), pp. 43-74.

background of a wall, a woman, dressed in ancient Greek fashion, holds a tablet in her right hand and a hooked stick in her left hand, whilst two serpents come out of her left sleeve. Through the hook of the stick the lady –engaged in questioning with two young men – grasps the arm of the interlocutor who holds a tablet. He probably acts the part of the incautious respondent who, having conceded the premises proposed by the answerer, “was soon caught on the hook and dragged toward the poisonous coils of the hidden snake”. We can imagine the following scene – which has not been depicted – of the Lady forcing her opponent to say something inconsistent; the poor respondent, “compelled to the intendent position”, would be “gripped in many coils” of the snakes springing from the sleeve of dialectic.

The serpent and Aristotle furthermore feature in an original illumination of Porphyry’s *Isagoge* (fig.7), produced perhaps in Paris at the same time when Peter Abelard and Hugh of Saint Victor were active.²⁶ The Lady is crowned, presumably for symbolizing the highest relevance which dialectic/logic assumed in the 12th century in the educational curriculum, especially within the *trivium*.²⁷ The lady holds a serpent in her left hand, and a scepter in a Porphyrian tree-shaped manner in her right hand. Interestingly, the illuminator has modernized the iconographical tradition of Dialectic by framing the Lady with four great philosophers. Aristotle, Plato and Socrates sit on three corners of the *folio* and the fourth person on the scene is, remarkably, a certain “magister Adam”, subsequently identified as the logician Adam of Balsham (Parvipontanus; 1105-c.1170),²⁸ who was one of the first authors to be somewhat acquainted with Aristotle’s *Topics*.

²⁶ Darmstad, Hessische Landesbibliothek, Ms. 2282, *Logica Vetus*. In addition to J. Tezmen-Siegel, *Die Darstellungen*, see Katzenellenbogen, “The Representation”, p. 39, im. 5.

²⁷ As underlined by Tezmen-Siegel, *Die Darstellungen*, in this image the *dialectica domina* as represented in the same way and with the attributes – like the crown and the scepter three-shaped – which in the following century will accompany Philosophy.

²⁸ John of Salisbury informs us that his friend Adam of Balsham wrote a treatise on logic, the *Ars disserendi* (1132), which exhibits influences by some writings compounding the *logica nova*, namely the *Topics* and the *Sophistical Refutations*. The *Ars Disserendi* has been published in L. Minio-Paluello, *Twelfth Century Logic. Texts and Studies*, I, *Adam Balsamiensis Parvipontani Ars disserendi (Dialectica Alexandri)*, Roma: Ed. di Storia e Letteratura, 1956; here Adam says that he wants “disserere in disputando”, that is “interrogatione et responsione” (Ch. 9, pp. 6-7 and 27, p. 18). On Adam of Balsham see L. Minio-Paluello, “The “Ars disserendi” of Adam Balsham “Parvipontanus””, in *Mediaeval and Renaissance Studies* III (1954), pp. 116-169.

In addition to the attributes related to Martianus' personification of Dialectic, at times, few other symbols, like the scepter or the key²⁹ were used too. The key appears in the so called "Newberry Diagram" (fig.8) – a set of written recommendations useful for portraying Philosophy and the seven Liberal Arts which garnishes the last folio of a manuscript of Boethius' *De Musica*.³⁰ In this schema the artist could find descriptions for shaping the allegorical female figures, their identifying ornaments, as well as the practical men who should accompany each of them. According to the "Newberry Diagram", Dialectic is "a virgin holding a key in her right hand, in her left this verse: through me is the true made firm and the false tested. From the sleeve of her left hand appears a serpent half way as if slipping through". The *magister* who should join her is Aristotle, shaped as "a man turned toward her, in his right hand holding the same verse; in his left hand he holds a book".³¹ This verbal representation of Dialectic implies the broader notion of dialectic as coextensive with logic, according to which dialectic/logic is the discipline discerning and concluding truth, but which also deals with fallacies and contentious argumentation. The written instruction of the "Newberry Diagram" are faithfully transposed in a series of illuminations produced at the Cistercian Abbey of Aldersbach around first quarter of the 13th century (fig.9).³² The personification of

²⁹ The key could symbolize the opening or closing, like the compelling argument that concludes or confirms the truth; it might simply allude to the conclusion alone. Interestingly, Alan of Lille mentions the key when depicting the usefulness of logic: "Qualiter ars logice, tamquam via, ianua, clavis, ostendit, reserat, aperit secreta sophie" (*Anticlaudianus*, III, vv. 70-71). In this context, the key should represent the logic as *ars artium*, which is useful for all the other disciplines and, more generally, is a prerequisite for attaining knowledge. In the Renaissance period, the key accompanied personifications of Grammar; De Tervarent traces back the source of this symbol to Martianus Capella: "La grammaire est la clef du langage et partant de tous les autres arts: « per grammaticam de aliis disputatur artibus »" (*Id.*, *Attributs et symboles*, p. 129).

³⁰ It dates from the 1050-1150 and is nowadays preserved in Chicago, Newberry library, Ms. F9, fol. 65; it was probably made in Admont. On the "Newberry diagram" see M. Masi, "A Newberry Diagram of the Liberal Arts", in *Gesta* 11/2 (1972), pp. 52-56; Tezmen-Siegel, *Die Darstellungen*; Schonfeld, "Sebald Beham", p. 53.

³¹ "Dialectica: Virgo in dextra clavem, in sinistra hunc versum: per me firmatur verum falsumque probatur; a cuius sinistra manica serpens dimidiis quasi persiliens apparet. Aristotiles: Cui vir oppositus, dextra eundem versum; in sinistro brachio librum tenet" (Image, text and English translation provided by Masi, "Newberry Diagram", pp. 53 and 55 respectively).

³² These drawings are at the end of a manuscript, which containing sermons of Peter Manducator and a treatise on music, preserved at München, Bayerische Staatsbibliothek, Clm. 2599; see Masi, "The Newberry Diagram"; E. Klemm, *Die illuminierten Handschriften des 13. Jahrhunderts deutscher Herkunft in der Bayerischen Staatsbibliothek*, Wiesbaden: Reichert, 1998; *Ead.*, "Artes liberales und antike Autoren in der Aldersbacher Sammelhandschrift Clm 2599", in *Zeitschrift fuer Kunstgeschichte* 41 (1978), pp. 1-15.

Dialectic bears a key in her right hand, and a lizard comes out from the left sleeve. The woman holds one extremity of a captive, in which it is written “per me firmatur verum falsumque probatur”. The other extremity of the ribbon is held by Aristotle, which stands in front of Dialectic. On the folio of the open book, which he bears, is written “omnis homo rationale est animal/omnis homo rationale non est animal [homo]”.

Martianus’ influence in visual arts was unrivalled along the High Middle Ages until the end of the twelfth century, when alternative sources of inspiration gradually came out, even though they impinged less on the creative imagination of artists than the *De nuptiis*. Accordingly, some variants of the type Dialectic made their appearance in the iconographical tradition.

During the years 1181-1183, Alan of Lille epitomized some of his philosophical ideas in the *Anticlaudianus*. Among the theories, concepts and notions that the *Doctor Universalis* approached in his allegorical poem are the seven Liberal Arts. Their female personifications, which are appointed to build the chariot that will drive Wisdom and Reason in their ascent until the Empyrean Heaven, are characterized in detail in the second and, especially, in the third book.³³ Alan did not preserve faithfully the legacy of Capella. He modified some aspects or added some details, as emerges in his word picture of Logic,³⁴ who is portrayed as a “solers, studiosa, laborans Virgo” who “intrat penetralia mentis”. Her pinched body and her hollowed face are marked by the fatigue of study, but her sight (*visus* and *intuitus*) did not suffer for it. Her rebel, uncombed hair seems to restlessly contend against each other:

Her right hand is adorned with a flower, and a scorpion, inflaming her left,
threatens with the sharp sting of his tail. One hand smells of honey, the other

³³ It is acknowledged that Alan’s works relies heavily on other sources; Sheridan has shown that in the *Anticlaudianus* Alan borrowed many words and phrases from the *De Consolatione Rationis* of Peter of Compostella. As regard to the Dialectic, it should be noticed that Peter’s text omits the visual description of the personification of logic (J. J. Sheridan, “The Seven Liberal Arts in Alan of Lille and Peter of Compostella”, in *Mediaeval Studies* 35 (1973), pp. 27-37, for the text see esp. pp. 28-30). On the seven Liberal Arts in the *Anticlaudianus* see S. Arcoleo, “Filosofia ed arti nell’ *Anticlaudianus* di Alano di Lilla”, in Koch, *Arts libéraux*, pp. 569-574; C. Meier, “Die Rezeption des *Anticlaudianus* Alans von Lille in Textkommentierung und Illustration”, in C. Meier – U. Ruberg, *Text und Bild: Aspekte des Zusammenwirkens zweier Künste im Mittelalter und früher Neuzeit*, Wiesbaden: Reichert, 1980, pp. 408-549.

³⁴ *Anticlaudianus* III, vv. 1-89.

gives off the smell of gall; one promises laughter, the other ends in tears; one attracts, the other repels, one anoints, by the other one is stung; one strikes, the other soothes, one graces, the other corrupts.³⁵

These lines make allusion to the structural ambivalence of logic, which embraces in itself the method of correct reasoning as well as the art of merely apparent correct reasoning, namely sophistry which is a *histrion verus*. This ambiguity is reflected in the axiological indeterminateness of logical argumentative patterns. Arguments, indeed, can be good, if they are directed at discerning what is true.³⁶ Or they can turn out to be *falsa argumenta*, namely sophistic or captious reasoning developed by a *pseudologicus* or *sophista*, who “temptat pro vero vendere falsum”, captiously argues to deceive the antagonist and vainly disputes. These ambiguities are expressed allegorically in the description of the lady. Her right side and the flower embellishing it symbolize the positive value of logic and the advantageousness of the correct logical reasoning. While her hair and especially the scorpion, which moves close to the left hand, can be interpreted as visual representations of eristic and sophistry. In Alan’s narration the flower has replaced the *formule* described by Martianus, while the scorpion has replaced the snake and the hidden hook, even though the snake will reappear few lines below.³⁷ The serpent and the scorpion had already made their appearance together in a passage of the Gospel of Luke, in which they had received a very wicked connotation.³⁸ This negative tradition associated to the scorpion was maintained and even buttressed by Church Fathers who, in their polemical writings, often drew parallels between the heretics and their offences

³⁵ Sheridan p. 91, ll. 25-31.

³⁶ Cf. *Anticlaudianus*, III, vv. 36-37: “Vis logice, veri facie truncata, recidit falsa, negans falsum veri latitare sub umbra”, and VII, vv. 261-269: “Logice virtus arguta [...] adverse parti concludere, frangere vires oppositas partemquem suam ratione tueri, vestigare viam veri falsumque fugare, scismaticos logice falsosque retundere fratres et pseudologicos et denudare sophistas”.

³⁷ *Anticlaudianus*, III, vv. 84-86: “Sed florem dextra resignat ad presens aliisque vacat, serpensque sinistram exit”. Perhaps the inconsistency between the attributes associated to logic by Alan – namely the scorpion at v. 26 and the snake at v. 85 – can be removed if we read attentively the passages. Alan says that the scorpion *incedens* [instead of the Latin text *incendens*, as proposed by C. Chiurco], that is “drawing near <the lady>, threaten her left hand, which might bear a serpent, even though Alan does not mention it in this place. For Chiurco’s proposal see: Alano di Lilla, *Viaggio della saggezza. Anticlaudianus. Discorso sulla sfera*, ed. by C. Chiurco, Milano: Bompiani, 2004, p. 359, fn.5.

³⁸ Lc. 10.19: “dedi vobis potestatem calcandi super serpentes et scorpiones et supra omnem virtutem inimicis et nihil vobis nocebit”.

against the Christian doctrine on the one hand and the scorpions and their attack on the other.³⁹ Thus, since antiquity the scorpion was employed as an emblem of insincerity and deceitfulness. And the way in which the scorpion attacks its prey from behind, with its tails, or laterally, by grasping it with one of its claws and then attacking with its stinger, was considered as a symbol of duplicity and treason, as emerges from the words of Gregory the Great:

At si fortasse iustum quempiam tantae iam virtutis invenerint, ut ei loqui contraria non praesumant, quia subversores esse non possunt, statim scorpiones fiunt. Scorpio enim palpando incedit, sed cauda ferit; nec mordet a facie, sed a posterioribus nocet. Scorpiones ergo sunt omnes blandi et malitiosi [...] Scorpiones ergo sunt qui blandi et innoxii in facie videntur, sed post dorsum portant unde venenum fundant.⁴⁰

However, Alan seems to have been the first author to have associated the scorpion with dialectic. Thus, his verbal description has been considered at the origin of the modification of the iconography of dialectic (see *fig.2*). His allegorical poem clears up why in some artworks, the codified type of Dialectic holding the serpent(s) leaves the stage to the new theme of Dialectic in which the woman is characterized by the scorpion. This motive still appears in works of Renaissance artists. In the fresco representing “A young man being introduced to the Seven Liberal Arts”, painted by Botticelli in 1482-3 for the Villa Lemmi (*fig.10*), the young Lorenzo Tornabuoni is introduced by a woman, presumably Venus, in the assembly of seven young ladies

³⁹ Medieval should not have been unaware that the word *Scorpio* is polysemantic; among other item, it can signify the animal, one of the Zodiac signs and also an instrument of torture (1 *King*. 12.14 “my father chastised you with whips, but I will chastise you with scorpions”; 2 *Chron*. 10.11; Isidore, *Etym*. 27.5.18: “Switches (*virga*) are the tips of branches and trees, so called because they are green or because they possess the power of persuading (*vis arguendi*) [...] it is knotty and has points, it is correctly called by the term *scorpio*, because it is driven into the body leaving a curved wound”). An interesting analysis of the scorpion as animal and as sign of the Zodiac is developed by L. Aurigemma, *Il segno dello scorpione nelle tradizioni occidentali dall'antichità greco-latina al Rinascimento*, Giulio Einaudi editore: Torino, 1976, esp. pp. 89-136 for the Middle Ages.

⁴⁰ “Lo scorpione unisce la Potenza segreta e velenosa alla forma propriamente «diabolica», cioè indiretta, del suo attacco. [...] Lo scorpione è diabolico perché colpisce di dietro e di traverso, cioè è in contrasto con le apparenze: è quindi falsità, ipocrisia, tradimento” (Aurigemma, *Il segno*, p. 92; in the following page is mentioned the above passage of Gregory the Great, *Homiliae in Ezechielem*, vol. 1, *Om*. 9, 21).

symbolizing the seven daughters of wisdom, namely the seven Liberal Arts.⁴¹ Among them, only the personification of Dialectic can be surely recognized. The veiled Lady, indeed, holds a stick in her right hand and a scorpion in the left. Even though the philosophical ideology that inspired Botticelli's allegory of the Arts is to be traced back to the Florentine Platonism and to Ficino in particular,⁴² nevertheless it did not affect the established iconography of Dialectic.

A year after Botticelli had finished the fresco, his fellow citizen Antonio del Pollaiuolo left Florence for Rome, where he spent ten years, from 1484 to 1493, to sculpt the bronze funeral monument of Sixtus IV (*fig.11*). The Pope is carved on the top encircled by the seven Virtues, while the personifications of the Seven Liberal Arts and of Sciences decorate the sides of the base. Pollaiuolo's allegorical figure of Dialectic represents one of the highest visual transpositions of the literal tradition tracing back to Alan. The left hand of the lady seems to caress a scorpion, which is on a table. The woman, bearing an oak branch in the right hand, leans against a chair, on which is eased down an open book. On its pages, it is epitomized the medieval concept of dialectic: "Ars artium et scientiarum scientia ego sum. In omnibus doctrinis principia quia ratiocinandi doceo, modum ideo verum et falsum undecumque elicio". These lines echo the opening words of Peter of Spain's *Tractatus* or *Summulae Logicales*, which in many later redactions describe dialectic as "ars artium et scientia scientiarum ad omnium methodorum principia viam habens"⁴³. The deepness of Dialectic's eyes perfectly translates into images Alan's idea that she "intrat penetralia mentis".

The beginning of the third book of the *Anticlaudianus* further introduces another variation to the codified attributes of dialectic by replacing the *formulae* with the flowers. Usually, artists rendered through images the description found in literary

⁴¹ Cf. M.T. D'Alverny, "La Sagesse et ses sept filles", in *Mélanges dédiés à la mémoire de Felix Grat*, Paris 1946-1949, I, pp. 245-278.

⁴² According to Gombrich, the lady who introduces Lorenzo "must be Venus because she is dressed exactly like her counterpart on the other wall [*scil.* The three Graces] and is also accompanied by Cupid" (E. H. Gombrich, "Botticelli's Mythologies: A Study in the Neoplatonic Symbolism of his Circle", in *Journal of the Warburg and Courtauld Institutes* 8 (1945), pp. 7-60, here p. 57). Gombrich clearly refutes Capella as the main source of inspiration for Botticelli, which is instead accepted by Verdier ("L'iconographie", pp. 343 e 346).

⁴³ Peter of Spain, *Tractatus called afterwards Summulae Logicales*, ed. by L. M. De Rijk, Van Gorcum & Co.: Assen, 1972, p. 1 and the critical apparatus.

sources. In Alanus' case, it seems to be the other way around: Alan rendered through words the description found in artworks.⁴⁴

In his *L'art religieux du XIII siècle en France*, Émile Mâle notes that medieval artists often, if not always, decorate the façades and interiors of the cathedrals with allegorical figures of Liberal Arts and Philosophy. On the west façade of the Chartres cathedral, dating to the 1145-1155,⁴⁵ is found one of the earliest sculptured allegory of the Liberal Arts and of Dialectic (*fig.1*);⁴⁶ here "the personifications of secular learning were for the first time considered important enough to frame a theological cycle".⁴⁷ The iconographical program of the Liberal Arts on the Royal Portal, which entangles a deeper philosophical and theological program, was perhaps elaborated by Thierry of Chartres.⁴⁸ Seven ladies surround the Virgin with her child, which occupies the center of the scene, the *sedes sapientiae*.⁴⁹ Each of the seven women sits above a man who represents a historical personality outstanding for the practice of that discipline and who, like "a secularized version of Evangelists", is engaged in thinking or writing. The artist has carved Lady Dialectic holding a flower in her right hand and a serpent or dragon with the head of a dog in the left. These outwards characteristics of dialectic hint at the good and evil (or bad argumentation). Beneath her sits "a man who dips his pen into the inkpot, and makes ready to write. One may safely assert that he is Aristotle".⁵⁰

"An intricate philosophical system" is implied in one the most illustrious medieval images representing "the relation of the Liberal Arts to Philosophy and to one

⁴⁴ Perhaps, Alan found these attributes of Logic in some of his literary sources (see *supra*, fn. Sheridan).

⁴⁵ The three west portals, along with the bases of the bell towers did not burn in the 1194 fire, which destroyed almost the whole cathedral.

⁴⁶ "The earliest representations of the Liberal Arts are found on the façades of Chartres and Laon. This is not surprising, for in the Middle Ages few Schools were as famous as those of Chartres and Laon" (Mâle, *Religious art*, pp. 81-82). Later, the Liberal Arts were represented in many cathedrals, "twice at Auxerre", at Sens, Rouen, Clermont-Ferrand, and Soissons: *ibid.*, p. 83.

⁴⁷ A. Katzenellenbogen, *The Sculptural Programs of Chartres Cathedral*. Christ, Mary, Ecclesia, New York: W. W. Norton & Co., 1964, p. 16.

⁴⁸ Katzenellenbogen, *The Sculptural Programs*, p. 19.

⁴⁹ According to Verdier (Verdier, "L'iconographie", p. 306), the circular arrangement of the scene translates in images the Neoplatonic idea of the gradual ascent to knowledge, which is found in Alcuin's prologue to the *De Grammatica* and echoes some lines of the first book of Capella's *De Nuptiis*.

⁵⁰ *ibid.* p. 88.

another",⁵¹ which decorates Herrad of Landsberg's *Hortus Deliciarum* (fig.12).⁵² Philosophical concepts and biblical themes are shaped together into the illumination representing the allegory of Philosophy and the Liberal Arts, which betrays various sources of inspiration.⁵³ The circular schematic organization of the scene, which recall to mind the rose windows of gothic cathedrals, has been paralleled to the "Newberry Diagram" by some scholars.⁵⁴ In both diagrams, the focus of the composition is the female personification of Philosophy. The crowned lady⁵⁵ is seated on throne at the center of two concentric circles. The *philosophi* Plato and Socrates, who are writing down their ideas,⁵⁶ sit beneath her in the internal circle, while seven women, symbolizing the Liberal Arts, are placed in the in a heptagon arcade constituting the external circle. However, despite the similarities in shape that emerge at first glance, the structural setting of the *Hortus Deliciarum* results much more articulated than the scheme from Newberry. Furthermore, the

⁵¹ Katzenellenbogen, "The Representation", p. 49.

⁵² The work, written between 1167 and 1185, is attributed to Herrad von Landsberg: R. Green – M. Evans – C. Bischoff – M. Curschmann, *Herrad of Hohenbourg, Hortus deliciarum I. Commentary*, Leiden 1979, pp. 104-6, plate 33; *II. Reconstruction*, Leiden 1979, Abt. 117-124.

⁵³ For a more detailed analysis of the symbolic sense of the illumination see Tezmen-Siegel, *Die Darstellungen*; Katzenellenbogen, "The Representation"; F. J. Griffiths, *The Garden of Delights: Reform and Renaissance for Women in the Twelfth Century*, University of Pennsylvania Press, Philadelphia: 2007, ch. 6.

⁵⁴ Masi affirms that it is possible "to establish a real link between the two, perhaps through some unknown intermediary" (Masi, "A Newberry Diagram", p. 54) and that the Newberry Diagram might be "the prototype of Herrad's illustration" (*ibid.*, p. 53). Masi's hypothesis has been rejected by Griffiths, *The Garden of Delights*, pp. 151-152.

⁵⁵ "Herrad's depiction of *Philosophia*, a secular figure, rather than *Sapientia*, a biblical one, is significant and reflects recent intellectual developments, as Katzenellenbogen comments: "It was, indeed, a bold step when about 1160 Philosophy took over the place of Wisdom". Herrad's *Philosophia* is shown as a queen enthroned; from her breast flow seven rivers, identified by an inscription to her right as the seven liberal arts, but also suggestive of the seven gifts of the spirit [...] From her crown, three heads protrude, which are identified as *ethica*, *logica* and *phisica*" (Griffiths, *The Garden of Delights*, pp. 150-151).

⁵⁶ As noticed by Verdier, Socrates and Plato accompany Philosophy at the center of the scene even in the bronze bowl found at Horst, and we find there the same word that are written in the circle surrounding Philosophy in the *Hortus*: "Septem per studia docet artes philosophia. Hec elementorum scrutatur et abdita rerum" (Verdier, "L'iconographie", p. 311). Usually, Plato and Socrates flank only the personification of Philosophy; on Plato and the seven Liberal Arts, see D. Knipp, "Medieval Visual Images of Plato", in S. Gersh – M.J.F.M. Hoenen, *The Platonic Tradition in the Middle Ages. A Doxographic Approach*, Berlin-New York, Walter de Gruyter, 2002, pp. 373-413, esp. p. 377. In the illumination of Herrad's writing, "at the bottom of the folio, outside the circles defined by *Philosophia*, four seated figures identified as poets and magicians are also shown at their desk. In contrast to Plato and Socrates, who, although not Christian, appear under the aegis of Philosophy, these men appear to derive inspiration from little black birds that are perched on their shoulders" (p. 149). The *poeti* and *magi* stand for those literary genres, such as poetry and fairy tales, which are not finalized at Christian knowledge.

personifications of the Seven Liberal Arts in Herrad's illumination do not follow the "verbal instructions" contained in the "Newberry Diagram": not the women with their individual attributes nor their mottoes coincide. As a case in point, consider Lady dialectic.

The fashionable woman representing Dialectic, positioned in her own arch, departs from the (iconographic) type met so far. The tablets (or *formulae*) have passed into Rhetoric's hands, from which Dialectic has borrowed the characteristic gesture of arguing.⁵⁷ Her right hand, indeed, points, while the left hand bears the head of a barking dog. The arch inscription is meant to shed light on the obscure meaning of the *caput canis* by saying "argumenta sino concurrere more canino" ("I allow arguments to clash or to follow each other in the manner of a dog"). However, these words do not fully clarify the sense of the scene. As we have seen, the dog's head appears also in the image of dialectic carved at Chartres. This similarity might signify that the dog had entered the iconographical tradition of the allegorical figure of Dialectic. But what connection does it have with this discipline? In visual arts, the dog carried various allegorical meanings, such as loyalty, sagacity and keenness.⁵⁸ In Bible commentaries from the early Christian period, this animal did not receive the positive connotations that Church Fathers and Medieval authors acknowledged to it in the following centuries. In his ninth homily on the *Hexameron*, Saint Basil had qualified the dog as "grateful and faithful in his friendship", and had remarked that even though it does not posse reason, the dog is gifted with an instinct having "the power of reason". That power enables the dog to learn "by nature the secret of elaborate inferences, which sages of the world, after long years of study, have hardly been able to disentangle". When it hunts its quarry, the dog, "neglecting the false tracks, discovers the true one",⁵⁹ in virtue of this natural power, through which it

⁵⁷ The gesture of point was used also for personifications of rhetoric; it should express the act of debating; Dialectic is represented while pointing, perhaps engaged in a dialectical exchange, also on the west portal of Laon cathedral (dating 1210-1230), and on the cathedral of Freiburg i. B. On gestures signifying arguing see K. A. Wirth, "Die kolorierten Federzeichnungen im cod. 2975 der Österreichischen Nationalbibliothek. Ein Beitrag zur Ikonographie der Artes Liberales im 15. Jahrhundert", in *Anzeiger des Germanischen Nationalmuseums* 1979, pp. 67-110.

⁵⁸ On this subject, see K. J. Höltgen, "Clever dogs and nimble spaniels: on the iconography of logic, invention and imagination", in *Explorations in Renaissance culture* 24 (1998), pp. 1-36.

⁵⁹ Saint Basil, *Exegetic Homilies*, Engl. tr. by A. C. Way, Catholic University of America Press 1963, pp. 138-139. This passage is analyzed by Höltgen, "Clever dogs".

can produce a kind of reasoning. Even an author widely read in the Middle Ages as Isidore had reckoned the cleverness as peculiar to dog, which he considered by far the smarter animal.⁶⁰ During the golden age of Scholastic “the dog became the attribute of the good prelate and preacher, and the members of the *Ordo Praedicatorum*, the Dominicans, gladly accepted the popular etymological interpretation of their name as *Domini canes* (Dogs of the Lord). No wonder that the pregnant mothers of St. Bernard of Clairvaux and St. Dominicus dreamt of giving birth to a dog [...] Such appreciation of the dog was mainly due to the prestige of dialectic in the theologically-oriented culture of the Middle Ages”.⁶¹ In this perspective, and taking into account the widely accepted ambiguous notion of logic, the dog accompanying Dialectic can be considered the visual representation of logic, considered in its narrower sense, and of sophistry. And the motto *more canino* “like growling and barking (*latratus*), could be interpreted *in malam partem* as loud, aggressive, rude and sophistical but also *in bonam partem* as symbolizing the zealous and vigilant orator and preacher fighting valiantly for the truth in the *duellum logicae*”.⁶²

Visual representations constituted an essential component of the *Der Welsche Gast*. This didactical poem can be qualified as a *Bilderkodex*, therefore its illustrations are not mere decorations of the *folios*, but constitute a visual elucidation of the written text. Accordingly, they were part of the original program elaborated by Thomasin von Zirclaria, who should have singled out what kind of and in which places images had to be placed.⁶³ Among the cycles that illuminate the great majority of the manuscripts preserving this writing, we find the cycles of the Seven Liberal Arts.⁶⁴ Despite the stylistic differences due to their diverse places and periods of origin, the manuscripts containing Thomas’ work share the same iconography of Dialectic

⁶⁰ Isidore of Sevilla, *Etymologiae*, XII.2.25, p. 253a. Hölting mentions it (“Clever dogs”, p.2).

⁶¹ Hölting, “Clever dogs”, pp. 8-11. “The reappraisal continued through the age of Humanism when dogs in the portraits of humanist scholars and churchmen symbolize their faithful concern for the truth in secular and spiritual matters” (*ibid.*, p. 11).

⁶² K.A. Wirth, “Die kolorierten Federzeichnungen”, p. 73.

⁶³ Cf. M. Gibbs – W. McConnell, *Der Welsche Gast (The Italian Guest)*, Kalamazoo: Medieval Institute, 2009, “Introduction”, p. 6.

⁶⁴ It is the first conduct manual written in vernacular German, around in 1215-1216. It is preserved in 24 manuscripts and the almost totality of the fifteen complete manuscripts, is largely illustrated. A detailed study of them is available on line <http://digi.ub.uni-heidelberg.de/wgd/>.

(fig.13-15). Her personification sits, more rarely stands, on the right side of the illumination, while Aristotle is right in front of her. They hold a square divided into four congruent triangles by two diagonals, whose elucidation is provided by the words written therein: "Omnis, nullus: contrarie. Contradictorie subalterne. Subcontrarie: quidam, quidam non. Contradictorie subalterne". Any beginner student of logic of that time would have recognized it as the traditional Square of Opposition, which was often integrated in logical text such as Boethius' writings. This diagram visually illustrates the doctrine of opposition, which was developed by Aristotle in the *De interpretatione* 6-7: it displays the principal types of logical relations (contradiction, contrariety, subcontrariety, subalternation) holding among the four kinds of categorical proposition (universal affirmative, universal negative, particular affirmative, particular negative), which have the same subject and predicate but different quality and/or quantity.

This representation of *Dialectica* shares only the subjects with the images taken into account so far, namely Lady dialectic and Aristotle. Any attribute or symbol has disappeared and has left the room to a less allusive and rather technical element, the traditional Square of Opposition. This iconological modification hints at a notion of dialectic/logic, according to which it is no longer considered as the ambiguous discipline, which deals with both truth and its appearance, but as the science of logic properly said, which is concerned with rules for discovering truth.

Some manuscripts, which were produced in Italy in the first half of the 14th century and containing various writings, testify to an established Italian iconographical tradition of the personification of dialectic, whose ancestor has been identified in an illumination prefacing the third book of Giovanni d'Andrea's "Novella in libros Decretalium", which was illuminated by Niccolò di Giacomo da Bologna or by some collaborator of him around the 1354 (fig.16). The iconographical program of the Virtues, Vice and the Liberal Arts implies a deeper philosophical and theological program. This allegory, indeed, visually represents the ways by which men can accomplish a gradual ascent to wisdom and spiritual perfection.

The upper section of the "Novella"'s frontispiece reproduces the allegories of virtues and vices, while the liberal arts occupy the lower part. The second figure on the left,

under which sits a man engaged in writing (probably Zoroaster)⁶⁵ represents *Loicha*. The young lady holds two snakes in her hands that symbolize the *opponens* and the *respondens*, as specified by the words written over their heads and between the necklace pendant, namely the head of a woman that might signify the *ratio*.⁶⁶

This iconography of dialectic bears resemblances with the allegorical figures that decorate some manuscripts containing Convevole da Prato's *Regia Carmina* (fig.17).⁶⁷ Petrarch's teacher conceived his poem as a *Bilderkodex*, accordingly it was probably Convevole himself who selected the images that accompany and complete the text. Unlike Niccolò's miniature, with which it partakes many elements, this personification of dialectic is supplemented by a title block. Its left part lists Aristotle's logical writings compounding the *vetus* and *nova logica*, namely "Ysagoge, Cathegorie, Peri eremenias, Topica, Analetica". It is linked to the left part through a stripe bearing the writing *Silogismus*. Its species are mentioned on the right side of the title block: the syllogism *topicus*, which pertains to dialectic properly said, then the *demonstrativus*, after which it is surprisingly placed the syllogism *probabilis* – which usually coincided with the topical or dialectical syllogism. The *elencus* and the *paralogismus* close this inventory.

Ernst Saenger wrongly thought that the illuminations decorating the *Regia Carmina* preserved in the Viennese manuscript were related, perhaps inspired, not to

⁶⁵ On Zoroaster as magician see Verdier, "L'iconographie", p. 311, fn. 15.

⁶⁶ The ratio should refer to Augustine's *de Ordine*, in which it is said that dialectic "docet docere, haec docet discere, in hac se ipsa ratio demonstrare atque aperit quid sit, quid velit; scit scire; sola scientes facere non solum vult sed etiam potest" (*De Ordine* II.XIII.38, ed. by W.M. Green (Corpus Christianorum Series Latina, vol. 29), Turnhout: Brepols, 1970, pp. 127.24-128.37). This passage is quoted *verbatim* by John of Salisbury, which in his *Metalogicon* connects it with Capella's ending of the description of dialectic in which it is mentioned the twofold Cyllenian serpent. On the autoship of the miniature see D. Guernelli, "Ancora su Niccolò di Giacomo e Stefano degli Azzi", in *Strenna Storica Bolognese* 65 (2015), pp. 273-283. On Niccolò di Giacomo see D. Guernelli, "Una Retorica per Niccolò di Giacomo. Tre nuove opere ed un punto su catalogo e cronologia", in *Strenna Storica Bolognese* 63 (2013), pp. 229-250; F. Pasut, *sub voce* "Niccolò di Giacomo di Nascimbene", in *Dizionario biografico dei miniatori italiani. Secoli IX-XVI*, ed. by M. Bollati, Milano, 2004, pp. 827-832.

⁶⁷ The *Regia Carmina* are transmitted by three manuscripts: the Florentine B.R. 38; the ms. 6.E.IX of the British Museum is the most ancient copy (1335-1340) and should be the exemplar donated to Robert d'Anjou; the later ms. Ser. Nov. 2638 is nowadays preserved at Vienna, Österreichische Nationalbibliothek. The three manuscripts were illuminated autonomously (the ms. 6.E.IX was decorated by Pacino di Bonaguida or Taddeo Gaddi's school) on the basis of the iconographical program elaborated by Convevole. The critical edition (*Regia carmina*, ed. by C. Grassi, Prato 1982) contains an analysis of the illuminations, which have been the subject of many studies, for instance G. Vaccaro, "Filologia del testo e filologia dell'immagine nei Regia carmina di Convevole da Prato", in *Convevole da Prato, Regia carmina: panegirico in onore di Roberto d'Angio. Commentario*, Torino: UTET, 2004, pp. 20-38.

Convenevole's poem, but rather to another writing, *La canzone delle Virtù e delle Scienze*, which was added at the end of the Viennese manuscript.⁶⁸ *The song of Virtues and Sciences* was composed as an illuminated poem by the scribe Bartolomeo di Bartoli for Bruzio Visconti around the 1349.⁶⁹ In the miniature of the allegorical figure of dialectic, which illuminates the most famous manuscript containing the *The Song*, namely the Condée manuscript (fig.18), neither the kinds of syllogisms nor Aristotle's logical writings are present. The anonymous illuminator only mentions the three parts of logic, namely "probabilis, demonstrativa, sophistica". Bartolomeo's *Canzone* was thought of as a *Bilderkodex*, and the words accompanying the visual representation of dialectic clarify the sense of the image.⁷⁰

An interesting variation in the iconographical tradition of the allegorical figure of dialectic is found in a German manuscript containing the didactic poem on the Virgin Mary and the arts, the *Der meide kranz*, written by Heinrich von Mügeln around 1355 (fig.19). In the Seven Liberal Art cycle of illuminations, all the personifications of the Arts are portrayed as crowned ladies. The "pale and thin" women representing *loyca* can be easily identified since "her right hand carried a dove, a serpent twisted through her left one":⁷¹ the serpent as attribute of the Lady was codified in the widespread medieval iconology of dialectic. Her other personal symbol, the dove resting on her right hand, deviates from the established tradition met thus far. In the written description of *loica*, Thomas puts in her mouth some words that portray her peculiarities:

In all discourse I know what is true and false. I deceive, but no-one deceives me.

I am responsible for many new discoveries as to how one should formulate

⁶⁸ E. Saenger, "Das Lobgedicht auf König Robert von Anjou. Ein Beitrag zur Kunst- und Geistesgeschichte des Trecento", in *Jahrbuch der kunsthistorischen Sammlungen in Wien* 84 (1988), pp. 7-91, here p. 73.

⁶⁹ The most famous manuscript containing it is nowadays at Chantilly, Musée Condé, Codice Ital. 1426: see L. Dorez, *La canzone delle virtù e delle scienze di Bartolomeo di Bartoli da Bologna, testo inedito del secolo XV tratto dal ms. originale del Museo Condé*, Bergamo: Istituto Italiano d'Arti Grafiche Editore, 1904; G. Orlandelli, *sub voce* "Bartoli, Bartolomeo de'", in *Dizionario Biografico degli Italiani*, Istituto dell'Enciclopedia italiana, Fondazione Treccani: Roma 1964, vol. 6, pp. 559-60; P. Stirnemann, "Bartolomeo di Bartoli: La canzone delle virtù e delle scienze", in *Enluminure Italienne: Chefs d'œuvre du Musée Condé*, Chantilly: Somogy Éditions D'Art, 2000, pp. 12-17.

⁷⁰ Dorez, *La canzone*, p. 39, and Dorez's commentary, p. 38 and pp. 63-64.

⁷¹ A. M. Volfing, *Heinrich von Mügeln: 'Der meide kranz'. A Commentary*, Tübingen: Niemeyer, 1997, pp. 73, 223-224.

judgments against the counterflow of feeble claims; and that one argument must follow from another, according to the straight aim of the wise heart [...] My track leads to the paths of all the arts. I can dispute about the origins of every kind of art [...] I am an art of reason / of speech [ich bin ein kunst der redlichkeit], which cuts out childish folly.⁷²

The substitution of the old themes, such as the *formulae*, the flower or the second serpent, with the dove, is due to the influence of a different literary source, namely the *Compendium Anticlaudianum* – a widely read shortened version of Alan's writing produced in some Austrian or Low German Cistercian monastery in the mid-13th century. Despite the title, whilst depicting *Dialectica*, the anonymous author did not slavishly follow in the footsteps of Alan. Even though the Lady whom he describes still has a pale, scrawny face, nevertheless the snake prevails over the scorpion and the flower in her right hand has been replaced by a white dove. This imagery of logic echoes the words of Jesus in the gospel of Matthew, where he cautions the twelve Apostles to be shrewd as snakes and innocent as doves.⁷³ But whilst the biblical animals were allegorical images of the Holy Spirit and Satan, in the logical context of the *Compendium* they symbolize the "veritas et falsitas" that can be discerned through dialectic: "Dialectica [...] docet discernere inter veritatem et falsitatem {vel} quasi diceret: "estote prudentes sicut serpentes, ut a nulla falsitate possitis decipi, et simplici<ces> sicut col<umbe>, ut simplicitatem veritatis sectantes nullum decipere studeatis".⁷⁴

⁷² Volfing, *Heinrich*, pp. 73-74, 224 and 250, 259. In the following sections she continues: "How noun-words are meaningful according to the will [of men]: see how a circle signifies wine and is nevertheless completely different from wine in the barrel. My teaching is said to be about the universal: [about] a thing in the soul, the predictability of which extends to many things which differ in number and species. Take note of my example. When I ask you, what is a ram, a man, a bull, a fish, you reply: an animal. As a genus, the term animal must be predicable of them all, in common, in accordance with their properties and differences. The lesson guides you towards the doctrine of the universal. The ass is irrational/incapable of speech, [while] Lord Friedrich possesses the opposite quality. [Lord Friedrich is] entirely capable of laughing and his hair [is] curly. The bull has the property of bellowing white and black I call accidents. The fool pokes fun at this. This existence of these five and the knowledge of them are worked into the soul by reason. They are not outside the souls, as the folly of the old master claims" (pp. 73-74, 232, 243, 250).

⁷³ Mt. 10,16.

⁷⁴ P. Ochsenbein, "Das *Compendium Anticlaudianum*. Eine neu entdeckte Vorlage Heinrichs von Neustadt", in *Zeitschrift für deutsches Altertum und deutsche Literatur* 98 (1969), pp. 80-109, esp. p. 101, 166-172.

A rather unusual representation of dialectic decorates the first folio of a miscellaneous 15th century manuscript, which opens with miniatures, as well as Latin and Old German verses on *De septem artibus liberalibus* (fig.20).⁷⁵ In this illumination, indeed, dialectic/logic is not represented as a lady, but as a fantastical creature with the body of a human and the head of a dog (less likely a wolf) – which evokes the decoration of the *Hortus deliciarum*. The “cynocephalic Loyca”, which gesticulates whilst disputing with a young man, affirms the conclusion as she herself says, “consecutiva [or conclusiva] tenet” – which is instead refused by the cleric (“nego consecutivam [or conclusivam]”). Behind a young man, who points at the *opponens*, stands a crowned ass, symbolizing the theologian who is not educated in logic, as it is specified in the banderole: “est sine loyca theologus quasi coronatus asinus”. Indeed as well known, logic in the Middle Ages was considered not only a science concerned with human reasoning, but also an art, an instrument useful for other disciplines, such as philosophy and theology. Yet this image puts on the foreground a further aspect of logic, more precisely of dialectic, namely the dialogue or dispute, which evolved into a codified methodological procedure in academic context.

From the beginning of 12th century, the dispute in form of questions had become the most important teaching method in both the ‘inferior’ and ‘superior’ faculties of European Universities. Professors elucidated the texts read in classrooms through the *quaestio* method, by confronting and resolving the conflicting opinions of the *auctoritates* on various issues that were more or less related to the textbook. Gradually, the *quaestio* gained its autonomous status in the *curricula studiorum* and played a prominent role in the (intellectual) training of students who, along with their masters, were required to participate in both classroom and public disputes, as prescribed by University statutes.⁷⁶ A representation of an academic disputation illuminates the first letter of the opening word of Boethius’ translation of the *Topics*,

⁷⁵ Wirth, “Die kolorierten Federzeichnungen”; Stolz, *Artes-liberales-Zyklen*.

⁷⁶ On the scholastic method see M. Grabmann, *Die Geschichte der scholastischen Methode*, 2 voll., Freiburg i. B.: Herder 1909; on the *quaestio* method see B. C. Bazàn – J. F. Wippel – G. Fransen – D. Jacquart, *Les questions disputées et les questions quodlibétiques dans les facultés de théologie, de droit et de médecine*, Turnhout: Brepols, 1985; B. Lawn, *The rise and decline of the scholastic Quaestio disputata: with special emphasis on its use in the teaching of medicine and science*, Leiden – New York – Köln: Brill, 1993.

preserved in a manuscript produced in Paris in the 13th century (*fig.21*).⁷⁷ The arguers engaged in the discussion point to each other. This gesture, as we have seen, characterizes also some of the personification of Dialectic. The emergence of the theme of the scholastic dispute in the iconographical tradition of dialectic could be related not to the appearance of new literal sources, but rather to the indirect influence of the academic life on the visual arts.

The analysis of the tradition of the iconography of dialectic/logic unveils further indirect sources of inspiration. Indeed, at times some ideas and concepts, present in logical writings used as University manuals, converge in visual representations. And, perhaps, classroom teaching reproduced ideas present in visual representations. A *summa* of all the key notions of Aristotelian and scholastic logic is the woodcut illustrating the “Typus Logice” prefacing the second book of Gregor Reisch’s *Margarita Philosophica*, which was probably conceived as a didactic tool for easily memorizing basic logical concepts (*fig.22*).

In this allegory, Logic is portrayed while chasing the prey, *Problema*. Two bloodhounds help her in her hunting; *Veritas* closely follows the hare, whilst *Falsitas* is distracted by a trunk. Clearly, the retrievers symbolize the ambiguous status of logic as a discipline concerned with the discernment of truth and falsehood on the one hand, and with sophistical and eristic argumentations on the other hand. Yet, the two dogs might take on a further, less obvious allegorical overtone, and symbolize the natural logic, namely the innate and imperfect capability to reason that is perfected through artificial logic, which provides men with a set of rules and argumentative techniques.⁷⁸ Indeed, some 15th century authors acknowledged this natural ability not only in human beings, but also in animals, and especially to the smartest animal, the dog. From the horn (*sonus vox*) that the lady plays, exit two flowers, representing the *praemissae* of the argument, whose *conclusio* is found on her chest next to an animal that looks like a scorpion. Even the woman’s hunting

⁷⁷ Oxford, Balliol College Library, ms. 253, f. 92r, Paris 13th century (see *infra* ch. 5). It is significant that among Aristotle’s logical writings contained in the ms., only the illuminated initial of the *Topics* represents a dispute.

⁷⁸ On the natural and artificial logic see M. J. F. M. Hoenen, “From Natural Thinking to Scientific Reasoning: Concepts of *Logica Naturalis* and *Logica Artificialis* in Late-Medieval and Early-Modern Thought”, in *Bulletin de philosophie médiévale* 52 (2010), pp. 81-116.

clothing and gear symbolize logical notions. The upper part of her boots represents the *praedicabilia* and *praedicamenta*, whereas the soles signify the two main species of sophisms, namely the fallacies *in dictione* and *extra dictionem*. The long knife, *syllogismus*, hangs off her belt. From the bow, *quaestio*, the huntress can fire the arrows – *argumenta*, which are placed in the quiver-*locus*. This visual of the lady's hunting equipment is highly reminiscent of the beginning of the fifth treatise of the *Summulae Logicales*, in which Peter of Spain explains that dubious propositions, otherwise called questions, should be proven through the argument, whose probative force is supplied by the topic: the *locus*, indeed, is the foundation of an argument.⁷⁹

In her hunt, Logic leaves behind her the 'rock of *Parmenides*'. This allusion to the myth that traces back the origin of dialectic to Parmenides – who invented this discipline while dwelling on "a rock in Egypt for fifteen years"⁸⁰ – refers to the developments achieved by this discipline. The huntress carefully eludes the perils that pave her path to the pray, passing aside the bramble of *insolubilia* and the *sylva opinionum*, which visually express the forest of philosophical opinions held by the main schools of thought, such as Albertists, Scotists, Ockhamists and Thomists.

The various changes that the representational tradition of Dialectic underwent during the 16th century, can be better seen by drawing a parallel between the images and the related descriptions of Dialectic and Logic found in Cesare Ripa's *Iconologia* (fig.23), the "*summa* of iconography which, drawing from classical and mediaeval as well as contemporary sources, has rightly been called "the key of seventeenth- and eighteenth-century allegory""⁸¹.

The woodcut of Dialectic provided by Ripa does not include any of the elements traditionally established as her identifying attributes. And this fact is confirmed by the short but precise description of the image: "Donna giovane che porti un elmo in

⁷⁹ "Argumentum est ratio rei dubiae faciens fidem [...] Quaestio est dubitabilis propositio [...] Argumentum autem per locum confirmatur [...] est enim locus sedes argumenti vel illud unde ad propositam quaestionem conveniens trahitur argumentum" (Peter of Spain, *Tractatus*, tr. V. 2 and 4, pp. 55 and 58).

⁸⁰ Hugh of St. Victor, *The Didascalicon*, 3.14, pp. 97-98.

⁸¹ E. Panofsky, *Meaning in the Visual Arts*, p. 163. Ripa's *Iconologia* was printed several times during the 16th and 17th century. The images presented here are taken from the French edition: *Iconologie ou explication nouvelle de plusieurs images, emblemes, et autres figures hyeroglyphiques des Vertus, des Vices, des Arts, des Sciences, des Causes naturelles, des Humeurs differents, et des Passions humaines*, Paris 1643.

capo con due penne, l'una bianca e l'altra nera et per cimiero una Luna et con un stocco nella man dritta, che d'ambidue le parti punge e tagli, pigliandosi con la mano in mezzo fra l'una e l'altra punta tenga le due prime dita della mano manca alte et stese stando in piedi con prontezza e ardire".⁸² The symbols that usually appear in the iconography of Dialectic, reappear all together in relation to Logic in Ripa's *Iconologia*. Amongst the three written portrayals of Logic found in the *Iconologia*, the third one pairs with imagery. Logic is depicted as a young lady, "nella mano destra tiene un mazzo di fiori, con un motto sopra, che dichi verum, e falsum, e nella sinistra un Serpente. Questa donna è pallida, perché il molto vegliare, e il grande studio, che intorno ad essa è necessario, è ordinariamente cagione di pallidezza, e indisposizione della vita [...] I fiori sono segno, che per industria di questa professione si vede il vero apparire, e il falso rimanere oppresso, come per opra della natura dall'herba nascono i fiori, che poi la ricoprono. Il Serpente c'insegna la Prudenza, necessarissima a questa professione, come a tutte l'altre, non si affaticando in altro l'humana industria, che in distiguere dal falso il vero et, secondo quella distinctione, saper poi operare con proportionata conformità al vero conosciuto, e amato. Scopre ancora il Serpente, che la Logica è stimata velenosa materia, e inaccessibile a chi non ha grande ingegno, e è amata a chi la gusta, e morde, e uccide quelli, che con temerità le si oppongono".⁸³

Since late antiquity, the ambivalent notion of logic, which accounted for the interchangeability between the terms logic and dialectic, was reflected in the iconography of Dialectic, one of the seven Liberal Arts. In the *Iconologia*, this ambiguity is resolved and the types of Dialectic and Logic acquire an iconographical autonomy.

From this quick overview on some visuals, the iconography of dialectic seems to have originated from the interplay of various sources, whose differences lie in minor details. Religious and didactical writings, like the Bible, the *De Nuptiis* and the *Anticlaudianus*, directly and indirectly pervaded artists' imaginations, providing them with manifold subjects. Unlike many classical iconographical subjects and

⁸² Cesare Ripa, *Iconologia ovvero descrizione dell'imagini universali cavate dall'antichità et da altri luoghi da Cesare Ripa Perugino*, Romae: appresso Lepido Facii, 1593, p. 103.

⁸³ *Ibid.*, pp. 293-4.

motifs, the humanist recovery of the classical tradition did not provoke any significant shift or abrupt break in the iconography of Dialectic. Indeed the newly available literary and visual sources did not affect the type of Dialectic. The main characteristic of the representations of dialectic/logic remained, despite some changes due to new stylistic and 'material' trends. The scene, indeed, often migrated from the parchment of the manuscripts, and the stone blocks and windows of cathedrals, to the plaster of the frescos decorating private and public rooms, and to the bronze tombs of princes and popes. Consequently, the actors on scene, often clothed in marvelous Renaissance dresses, were portrayed as more expressive.

Probably, a more momentous step in the evolution of the iconology of Dialectic was the preceding Medieval rediscovery of some of the Aristotelian logical writings, which appears to have influenced visual arts in oblique ways, and perhaps unconsciously. Aristotle's *Organon* conveyed and ratified an association of ideas between dialectic and other parts of logic, which were translated into images and entered in the traditional type of Dialectic/Logic. More generally, then, the teaching activity of Medieval Universities integrated the traditional representations of Dialectic and supplied it with new themes.

It is thus now the moment for us to enquire further into these unfamiliar indirect sources.

Chapter Two. Dialectic in the Middle Ages. Before and after the recovery of Aristotle's *Topics*.

2.1 "Della dialettica come dell'essere, πολλαχῶς λέγεται".⁸⁴

2.1.1 "Being is said in many ways", claims Aristotle.⁸⁵ And we can add, paraphrasing his words, that 'dialectic' too is said in many ways. Within the history of Western philosophy, the term 'dialectic' has been used in numerous senses which seem to not be reducible to a unifying or primary sense,⁸⁶ or more correctly, to a rich primary sense. If we scrutinize all the various meanings enjoyed by the term 'dialectic' during various epochs – from Zeno of Elea, Gorgias, Plato and Aristotle to Pavel Florenskij, Hans-Georg Gadamer, Jean Paul Sartre and Theodor W. Adorno –, we might discover a unifying notion capable of capturing some common features of 'dialectic'. But it will result too vague to be used as historiographical category.

⁸⁴ I. Mancini, "De Profundis per la dialettica", in *Id.*, *Frammento su Dio*, Brescia: Morcelliana, 2000, pp. 63-121, here p. 70.

⁸⁵ Aristotle, *Metaphysics*, VII.1, 1028a10.

⁸⁶ Mancini (see fn. 84) offers a theoretical distinction between the various senses of dialectic. An historical overview on the various meanings of dialectic is found in an old article by Nicola Abbagnano, "Quattro concetti di dialettica", in *Rivista di Filosofia* 49/2 (1958), pp. 123-133, reprinted in AAVV, *Studi sulla dialettica*, Torino: Taylor, 1969. In addition, on dialectic in general see AAVV, *Aspects de la dialectique*, Paris: Librairie Philosophique J. Vrin, 1956; R. Franchini, *Le origini della dialettica*, Napoli: Giannini, 1962; L. Sichirolo, *Dialettica*, Milano: Istituto Editoriale Internazionale, 1973. On Late Antiquity, Medieval and pre-Humanistic dialectic see: E. Garin, "La dialettica dal secolo XII ai principi dell'età moderna", in *Rivista di Filosofia* 99/2 (1958), pp. 228-253 (reprinted in *L'età nuova. Ricerche di storia della cultura dal XII al XVI secolo*, Napoli: Morano Editore, 1969, pp. 43-79; I will refer to this edition); J. A. Weisheipl, "Classification of the sciences in medieval thought", in *Mediaeval Studies* 27 (1965), pp. 54-90; G. D'Onofrio, «Fons scientiae». *La dialettica nell'Occidente tardo-antico*, Napoli: Liguori, 1986; I. Hadot, *Arts libéraux et philosophie dans la pensée antique. Contribution à l'histoire de l'éducation et de la culture dans l'Antiquité*, Paris: Vrin, 2005², esp. chs. 4-6; H.-U. Wöhler, *Dialektik in der mittelalterlichen Philosophie*, Berlin: Akademie Verlag, 2006; M. Spranzi, *The Art of Dialectic between Dialogue and Rhetoric: The Aristotelian Tradition*, Amsterdam: John Benjamins, 2011. On the debated question about the nature of medieval logic see P. V. Spade, "Why Don't Mediaeval Logicians Ever Tell Us What They're Doing? Or, What Is This, A Conspiracy?" (2000), available on line: <http://pvspade.com/Logic/docs/Conspiracy.pdf>; *Id.*, "Thoughts, words, and things. An introduction to late medieval logic and semantic theory (2007)" available on line: http://pvspade.com/Logic/docs/Thoughts,%20Words%20and%20Things1_2.pdf, esp. pp. 2-3; L. Cesalli, "What is medieval logic after all? Towards a scientific use of natural language", in *Bulletin de Philosophie Médiévale* 52 (2010), pp. 49-53; *Id.*, "Postscript. Medieval Logic as Sprachphilosophie", in *Bulletin de Philosophie Médiévale*, 52 (2010), pp. 117-132.

Within the boundaries assigned to the present inquiry about medieval, prehumanistic dialectic, it will suffice to restrict the examination to the different “significance of the employment of this designation of *a science or art* among the ancient”⁸⁷ and to outline the intellectual frameworks underlying these significations in order to understand them fully. This chronological delimitation will allow us to investigate thinking *on* ‘dialectic’ rather than dialectical thinking. Moreover, it will justify us for disregarding one of the most important and influential notions of dialectic, namely the Hegelian one. Indeed, Hegel’s logical-methodological and metaphysical category of dialectic, along with 19th and 20th century ideas about dialectic, will be immaterial to the present context.

If we want to understand the polysemanticity of the term ‘dialectic’ in the Middle Ages, we should preliminarily take a brief step back to ancient Greece, where we find the foundation of dialectic, and then to Late Antiquity. Thus, by considering the origin and early development of the notion of ‘dialectic’ from the perspective of the history of philosophy,⁸⁸ we will disclose the way in which the problematic concept of dialectic showed up in Medieval times.

During the Classic and Hellenistic periods, the term ‘dialectic’ assumed at least three different senses, which derived from three diverse philosophical traditions, namely 1) the Platonic, 2) the Aristotelian and 3) the Stoic.

⁸⁷ “General logic, as putative organon, is called dialectic. As different as the significance of the employment of this designation of a science or art among the ancients may have been, one can still infer from their actual use of it that among them it was nothing other than a logic of illusion – a sophistical art for giving to its ignorance, indeed even to its intentional tricks, the air of truth, by imitating the method of thoroughness, which logic prescribes in general, and using its *topics* for the embellishment of every empty pretensions” (I. Kant, *Critique of Pure Reason*, tr. by P. Guyer-A. W. Wood, Cambridge: Cambridge University Press, 1998, 2nd part Transcendental Logic, Introduction, III, A61, B85-85, p. 198; emphasis is added).

⁸⁸ The notion of ‘dialectic’ will be treated as objectively as possible, namely within the Medieval intellectual framework and as the authors presented it in their texts (I will consider only logical writings, leaving aside theological, rhetorical and grammatical works). This is in the hope of avoiding the imposition of philosophical categories that are far from an author’s thought, if not completely anachronistic. Following in the footsteps of Hegel’s *Lectures on the History of Philosophy* (esp. vol. 2), some 19th and 20th century authors have proposed a history of dialectic that covers the period from Zeno of Elea to Hegel. From their philosophical, rather than historic viewpoint, the history of the idea of dialectic consists in the recognition of the progressive stages in the development of the doctrine of the *coincidentia oppositorum*, whose apogee or full realization they considered to be Hegelian dialectic. Examples of this trend can be found in Benedetto Croce (*Saggio sullo Hegel*, Bari: Laterza, 1913, ch. 2 “Chiarimenti circa la storia della dialettica”, pp. 25-36) and in Franchini (*Le origini*, esp. chs. 2-7).

1) Plato's dialogical dialectic as philosophical method for searching truth.

In many of his works, Plato displayed a dialogical notion of dialectic. According to him, dialectic was the philosophical method of inquiry *par excellence* and it was characterized by two complementary features. Firstly, dialectic intended to perceive and bring "together in one idea the scattered particulars" and to make "clear by definition the particular thing" that were to be explained. Secondly, dialectic aimed at "dividing things again by classes, where the natural joints are".⁸⁹ Medieval authors were not acquainted with the Platonic dialogues and, accordingly, with the dialogical dialectic exhibited therein. At the most, they knew Plato's dialectic indirectly and bereft of its ontological overtones through the writings of authors such as Cicero, Saint Augustine, Isidore of Sevilla⁹⁰ and Boethius. Accordingly, the Platonic view of dialectic as the philosophical method actualized through the *synagōgē* and *diairesis* can be dismissed as non momentous to the present inquiry.

2) Aristotle's dialectical art as the 'logica probabiliū' (logic of probable): dialectic is the art of debating starting from probable premises.⁹¹

The opening lines of Aristotle's *Rhetoric* describe dialectic, whose 'counterpart' is rhetoric, as the argumentative procedure which starts from the κοινὰ, namely what is "in a certain way common to everyone to know", and which is employed in ordinary discussions or conversations by people: "All men", claimed the Stagirite, "attempt to discuss statements and to maintain them, to defend themselves and to attack others". This dialectical exchange, Aristotle continued, could be led either

⁸⁹ Plato, *Phaedrus* 265d-e.

⁹⁰ Probably relying on St. Augustine [*De Civitate Dei contra Paganos*, VIII.4], Isidore ascribed the Stoic bipartition of logic into dialectic and rhetoric to Plato. Isidore proposed the tripartite division of philosophy into physics (*naturalis*), ethics (*moralis*) and logic. Logic, "quae rationalis vocatur, Plato subiunxit, per quam, discussis rerum morumque causis, vim earum rationabiliter perscrutatus est, dividens eam in Dialecticam et Rhetoricam" (Isidorus Hispalensis, *Etymologiarum*, II.24.3-8, here 7). Iwakuma has pointed out that "none of the medieval texts [he has] worked with calls this division Platonic" (see Y. Iwakuma, "The Division of Philosophy and the Place of the Trivium From the 9th to the mid-12th Centuries", in S. Ebbesen – R. L. Friedman, *Medieval Analyses in Language and Cognition*, Copenhagen: Det Kongelige Danske Videnskabernes Selskab, 1999, pp. 165-189, here p. 166, fn. 3). After having exposed the tripartite schema, Isidore proposed the alternative bipartite Aristotelian subdivision of philosophy into a theoretical and a practical part, which he might have borrowed from Cassiodorus' *Institutiones*, II.3.4 (Isidorus Hispalensis, *Etymologiarum*, II.24.10-16).

⁹¹ I will not enter into the *vexata quaestio* of whether Aristotle's dialectic can be considered as 'strong' or 'weak'.

‘spontaneously’, as with the majority of people, or “through practice and from acquired habit”. Dialectical reasoning in general, he added, “can plainly be handled systematically” and “such an inquiry is the function of an *art* (τέχνης ἔργον εἶναι)”, namely of dialectic.⁹²

In the *Sophistical Refutations*, which in the past, and partly nowadays too, has been considered the ninth book of the *Topics*, Aristotle made similar claims while expanding upon dialectic, especially on ‘peirastic’ or the *art* of examination. In this context, the Stagirite affirmed that starting from the general principles or notions (the κοινά), even unlearned and common people were able to use dialectic and peirastic “for all undertake to some extent a test of those who profess to know things [...] and are engaged in refutation”. Unlike the ‘amateurs’, however, the ‘dialectician’ reasoned and examined “by the help of a theory of deduction”,⁹³ namely according to dialectical rules. “After assuming that something does or does not belong to something”,⁹⁴ the dialectician started arguing through deduction,

⁹² “Rhetoric is the counterpart of dialectic. Both alike are concerned with such things (κοινὰ) as come, more or less, within the general ken of all men and belong to no definite science. Accordingly all men make use, more or less, of both; for to a certain extent all men attempt to discuss statements and to maintain them, to defend themselves and to attack others. The majority does this either spontaneously, while others through practice and from acquired habit (τῶν μὲν οὖν πολλῶν οἱ μὲν εἰκὴ ταῦτα δρῶσιν, οἱ δὲ διὰ συνηθειαν ἀπὸ ἔξεως). Both ways being possible, the subject can plainly be handled systematically, for it is possible to inquire the reason why some speakers succeed through practice and others spontaneously (ἀπὸ τοῦ αὐτομάτου); and everyone will at once agree that such an inquiry is the function of an art” (Aristotle, *Rhetoric*, I.11, 1354a1-11, in Aristotle, *Complete Works*, ed. by J. Barnes, 2 vols, vol. 2, p. 2152; I modified some lines of the English translation).

¹⁰ “Dialectic, on the other hand, does proceed by questioning, whereas if it were concerned to prove things, it would have refrained from putting questions, even if not about everything, at least about the primitives and the appropriate principles [...] Dialectic is at the same time a mode of examination as well. For the art of examination is not an accomplishment of the same kind as geometry, but one which a man may possess, even though he has not knowledge. For it is possible even for one without knowledge to hold an examination of one who is without knowledge, if the latter grants him points taken not from things that he knows or from the proper principles but from the consequences which a man may know without knowing the art in question (but which if he does not know, he is bound to be ignorant of the art) [...] Hence everybody, including even amateurs, makes use in a way of dialectic and the practice of examining; for all undertake to some extent a test of those who profess to know things. What serves them here is the general principles (κοινὰ); for they know these themselves just as well as the scientist, even if in what they say they seem to go wildly astray. All, then, are engaged in refutation; for they take a hand as amateurs in the same task with which dialectic is concerned professionally; and he is a dialectician who examines by the help of a theory of deduction” (Aristotle, *Sophistical Refutations*, 11, 172a17-35, in Barnes, *Complete Works*, vol. 1, p. 292).

⁹⁴ “A demonstrative proposition differs from a dialectical one, because a demonstrative proposition is the assumption of one of the two contradictory statements (the demonstrator does not ask for his premiss, but lays it down), whereas a dialectical proposition choice between two contradictories” (Aristotle, *Prior Analytics*, I.1, 24a21-27, in Barnes, *Complete Works*, vol. 1, p. 39).

likewise the demonstrator did. But while the dialectician proceeded “by putting questions”,⁹⁵ “the demonstrator d[id] not ask for his premiss, but la[id] it down”.⁹⁶ From the previous passages, dialectic emerged as the intersubjective *art* of debating starting from the κοινά, namely from what is “in a certain way common to everyone to know”. The vague notion of κοινά, which functioned as starting points of dialectical arguments, might be elucidated within the framework of Aristotle’s *Topics*, which is considered *the* Aristotelian writing devoted to dialectic.⁹⁷ At the beginning of this treatise, the Stagirite stated that dialectical deductions reasoned from ἔνδοξα, which therefore seemed to amount to the κοινά. And he explained that the ἔνδοξα or ‘reputable opinions’ are those opinions “which are accepted by everyone or by the majority or by the wise – i.e. by all, or by the majority, or by the most notable and reputable of them”.⁹⁸ And, moreover, Aristotle strictly entangled dialectical reasoning with the topics, though in a somewhat obscure way.

We will expand upon these points in the following chapters. What is relevant at this stage is: on the one hand, the Aristotelian demarcation of demonstration and dialectic, the latter of which he considered an art (τέχνη); on the other hand, the link established between dialectical art, topics and probability.

⁹⁵ Aristotle, *Sophistical Refutations*, 11, 172a35.

⁹⁶ *Ibid.*

⁹⁷ On Aristotle’s dialectic, the secondary literature is vast. See at least: G. E. L. Owen, “Tithenai Ta Phainomena”, in S. Mansion, *Aristote et les problèmes de méthode: communications présentées au Symposium Aristotelicum tenu à Louvain du 24 août au 1^{er} septembre 1960*, Louvain: Publications Universitaires de Louvain, 1961, pp. 83-103; *Id.*, *Aristotle on Dialectic: The Topics. Proceedings of the Third Symposium Aristotelicum*, Oxford: Clarendon Press, 1968; J. Brunschwig, “Dialectique et ontologie chez Aristote”, in *Revue Philosophique* 89 (1964), pp. 179-200; T. Irwin, *Aristotle’s First Principles*, Oxford: Clarendon Press, 1988; J. Barnes, “Philosophie et dialectique”, in M.A. Sinaceur, “Penser avec Aristote”, Toulouse: Erès, 1991, pp. 107-116; J. Brunschwig, “Dialectique et philosophie chez Aristote, à nouveau”, in N. Cordero, *Ontologie et dialogue. Mélanges en hommage à Pierre Aubenque*, Paris: Vrin, pp. 107-130; M. Sym, *From Puzzles to Principles? Essays on Aristotle’s Dialectic*, Lanham – Boulder – New York – Oxford: Lexington Books, 1999; on the *Topics* and its content see W. A. De Pater, *Les Topiques d’Aristote et la dialectique platonicienne. La méthodologie de la définition*, Fribourg: St. Paul, 1965; J. Brunschwig, “Introduction”, in *Aristote, Les Topiques, livres I-IV*, Paris: Les Belles Lettres, 1967; *Id.*, “Introduction”, in *Aristote, Les Topiques, livres V-VIII*, Paris: Les Belles Lettres, 2007; Aristotle, *Topics Books I & VIII. With excerpts from related texts*, ed. by R. Smith, Oxford: Oxford University Press, 1997; P. Slomkowski, *Aristotle’s Topics*, Leiden-New York-Köln: Brill, 1997.

⁹⁸ Aristotle, *Topics*, I.1, 100a30-b24, in Barnes, *Complete Works*, vol. 1, pp. 167-8.

3) Stoics: dialectic is the science that enables “to distinguish between truth and falsehood”.⁹⁹

In his *Lives of Philosophers*, Diogenes Laertius sketched the Stoic tripartition of philosophy, in which logic occupied a place next to physics and ethics. Within the domain of logic fell elements of speech, mental impressions and laws of reasoning – subjects that nowadays pertain not only to logic, but also to other disciplines such as grammar, semantics, philosophy of language, epistemology, and rhetoric. The Stoics usually subdivided logic “into the two sciences of rhetoric and dialectic”. Rhetoric, “the science of speaking well on matters set forth by plain narrative”, contributed to “the invention of arguments, their expression in words, their arrangement, and delivery”. Whilst dialectic was deemed to enable the wise “to distinguish between truth and falsehood, and to discriminate what is merely plausible and what is ambiguously expressed” and to “methodically put questions and give answers”.¹⁰⁰ From the Stoic perspective, therefore, insofar as it was part of philosophy, dialectic was a science, and not an art, and it was coextensive with logic in the modern sense.

2.1.2 In Ancient times, the Stoic notion of dialectic, which equated dialectic with logic, appeared to predominate, whilst the Aristotelian idea of dialectic as the logic of probability, along with the related doctrine of the topics, did not receive full appreciation and attention.¹⁰¹ The first words of Cicero’s *Topica* offer us a testimony of the oblivion into which the homonymous Aristotelian treatise had fallen and of

⁹⁹ The secondary literature devoted to Stoic Logic is conspicuous, among the many contributors figure: B. Mates, *Stoic Logic*, Berkeley-Los Angeles: University of California Press, 1961; M. Frede, *Die stoische Logik*, Göttingen: Vandenhoeck & Ruprecht, 1974; A. Specia, *Hypothetical Syllogistic and Stoic Logic*, Leiden – Boston – Köln: E.J. Brill, 2001; cf. also J.-B. Gourinat, “La postérité de la classification aristotélécienne des syllogismes”, in J. Brumberg-Chaumont, *Ad notitiam ignoti*, pp. 63-115.

¹⁰⁰ Diogenes Laertius, *Lives of Philosophers*, VII.1, 42-47, Eng. tr. By R. D. Hicks, Cambridge (Mass.): Harvard University Press, 1925, 2 vols, vol. 2, p. 157.

¹⁰¹ On the development of the *topics* in Ancient times see E. Stump, *Dialectic and its Place in the Development of Medieval Logic*, Ithaca and London: Cornell University Press, 1989, pp. 58-66; Green-Pedersen, *The Tradition*; S. Ebbesen, “The Theory of ‘loci’ in Antiquity and the Middle Ages”, in K. Jacobi, *Argumentationstheorie: Scholastische Forschungen zu den logischen und semantischen Regeln korrekten Folgerns*, Leiden: Brill, 1993, pp. 15-39; K. Hülser, “The topical syllogism and Stoic logic”, in J. Biard – F. Mariani Zini, *Les lieux de l’argumentation. Histoire du syllogisme topique d’Aristote à Leibniz*, Turnhout: Brepols, 2009, pp. 93-118; S. Rubinelli, *Ars Topica. The Classical Technique of Constructing Arguments from Aristotle to Cicero*, Dordrecht: Springer, 2009.

how topical argumentation had migrated from the philosophical to the rhetorical camp. Neither orators nor philosophers of his time, complained the Arpinate, were acquainted with “certain Topics of Aristotle” in which were “contained a system developed by Aristotle for inventing arguments (*disciplinam inveniendorum argumentorum*) so that we might come upon them by a rational system without wandering about”.¹⁰² Even more interesting are the subsequent lines, which reveal the high level of complexity that the notion of dialectic had reached in the mid-1st century BC. At that time, the *ratio disserendi*, as Cicero called logic, comprised two parts, “one concerned with invention of arguments (*inveniendi*) and the other with judgement of their validity (*iudicandi*)”. Aristotle cultivated both. The Stoics instead “followed diligently the ways of judgement (*iudicandi vias*) by means of the *science* (*scientia*) which they called διαλεκτική (dialectic), but they totally neglected the *art* (*artem inveniendi*) which is called τοπική (topics)”.¹⁰³ These lines bear testimony to the semantic slipping of the term ‘dialectic’ and to the changes that the notion of dialectic had undergone from Aristotle to Cicero. According to the Stagirite, indeed, the adjective ‘διαλεκτική’ implied the noun ‘τέχνη’ for it referred to the art concerned with the production (or invention) of dialectical arguments through the topics. In contrast, at Cicero’s time dialectic was the science concerned with the judgement of

¹⁰² “You [*scil.* Caius Trebatius] will remember that when we were together in my Tusculan villa and were sitting in the library, each of us according to his fancy unrolling the volumes which he wished, you hit upon certain Topics of Aristotle which were expounded by him in several books (*incidisti in Aristotelis topica quaedam, quae sunt ab illo pluribus libris explicata*). Excited by the title, you immediately asked me what the subject of the work was. And when I had made clear to you that these books contained a system developed by Aristotle for inventing arguments so that we might come upon them by a rational system without wandering about (*disciplinam inveniendorum argumentorum, ut sine ullo errore ad ea ratione et via perveniremus*), you begged me to teach you the subject [...] I urged you to read the books yourself, or acquire the whole system (*totam rationem*) from a very learned teacher of oratory whom I named. You had tried both, as you told me. But you were repelled from reading the books by their obscurity (*sed a libris te obscuritas reiecit*); and that great teacher replied that he was not acquainted with these works, which are, as I think, by Aristotle. I am not indeed astonished in the slightest degree that the philosopher (*eum philosophum*) was unknown to the teacher of oratory, for he is ignored by all except a few of the professed philosophers. The philosophers deserve less excuse for their neglect, because they should have been attracted, not only by the matter which he has discovered and presented (*rebus [...] quae ab illo dictae et inventae sunt*), but also by an unbelievable charm and richness in his style (*sed dicendi quoque incredibili quadam cum copia tum etiam suavitate*) [...] and when I left you, and set on my way to Greece [...] since I had no books with me, I wrote up what I could remember on the voyage and sent it to you” (Cicero, *Topica*, i, 1, in *Id., De inventione, De optimo genere oratorum, Topica*, Engl. tr. by H.M. Hubbell (Cicero in twenty-eight volumes, vol. II), London – Cambridge (Mass.): William Heinemann – Harvard University Press, 1976, pp. 382-384).

¹⁰³ Cicero, *Topica*, i-ii, 1-8, in *Id., De inventione*, pp. 382-389.

the validity of arguments.¹⁰⁴ Dialectic, however, was not only a science having its own subject matter, principles and laws, but also an art. An art, Cicero stated, that functioned as an interdisciplinary method for scientifically ordering knowledge of any kind. In a passage of the *Brutus*, the Arpinate described dialectic as the “art which (1) teaches the analysis of a whole into its component parts, (2) sets forth and defines the latent and implicit, (3) interprets and makes clear the obscure; which (4) first recognizes the ambiguous and then distinguishes; which (5) applies in short a rule or measure for adjudging truth and falsehood, for (6) determining what conclusion follow from what premises, and what do not”. Insofar as it taught how to divide and define, discern truth and falsehood, and evaluate the validity of arguments, dialectic was “the mistress of all arts, he brought to bear on all that had been put together by others without system, whether in the form of legal opinions or in actual trials”.¹⁰⁵ The Ciceronian qualification of dialectic as the ‘ars omnium artium’¹⁰⁶ recalls to mind the later Augustinian appellation of dialectic as the ‘disciplina disciplinarum’: both manifest the universal methodological function of dialectic in relation to all sciences. Indeed dialectic, which Augustine considered a science, “teaches how to teach and how to learn; in it Reason shows itself and manifests what it is, what it wants, what it can achieve. It knows how to know; it alone not only wants to make knowers but also can do it”.¹⁰⁷

¹⁰⁴ A careful treatment of dialectic in Late Antiquity and Early Middle Ages that offers an analysis of the most important texts, is provided by D’Onofrio, «*Fons scientiae*».

¹⁰⁵ Cicero, *Brutus, Orator*, Engl. tr. by G.L. Hendrickson – H.M. Hubbell (Cicero in twenty-eight volumes, vol. V), London – Cambridge (Mass.): William Heinemann – Harvard University Press, 1971, pp. 128-131. Cf. also *Ibid.*, 42, 189-90; *De oratore* 1.41-42, 186-8; *De finibus bonorum et malorum* 2.6, 18; *Academica Priora* 2.28, 91; *Orator* 32, 113-33, 118.

¹⁰⁶ René-Antoine Gauthier has traced the origin of the definition ‘ars artium et scientia scientiarum’ back to the tradition of Greek commentators, such as Ammonius, John Philoponus, Elias and David the Invincible, who used this description with reference to philosophy in general and to the beginning of Aristotle’s *Metaphysics*. Cf. Thomas Aquinas, *Expositio libri Posteriorum. Editio altera retractata*, ed. by R.-A. Gauthier, in *Sancti Thomae de Aquino Opera Omnia iussu Leonis XIII p.m. edita*, Romae-Paris: Commissio Leonina-Vrin, 1989, vol. I*.2, p. 4, fn. on ll. 29-30.

¹⁰⁷ “Disciplina disciplinarum [...] docet docere, haec docet discere: in hac se ipsa ratio demonstrat atque aperit, quae sit, quid velit, quid valeat. Scit scire, sola scientes facere non solum vult sed etiam potest” (Augustine, *De Ordine*, II. XIII 38, pp. 127.24-128.37; emphasis is added). In this overview of dialectic I will not touch upon the issue of the *reductio artium ad philosophiam* and, indirectly, *ad theologiam*.

In the first centuries of the Christian epoch, dialectic was integrated within the didactic system of the seven liberal arts. The *trivium* and *quadrivium* were at the basis of the organization of the Early Medieval educational program, whose conceptual framework was also furnished by encyclopaedic works such as the writings of Martianus Capella, Cassiodorus and Isidore of Sevilla. Martianus Capella did not expand upon the internal ordering of philosophical discipline. In the fourth book of the *De nuptiis Philologiae et Mercurii*, through the personification of Dialectic, Martianus emphasised the priority of this art over its six sisters in virtue of its unique prerogatives. Dialectic alone could provide the other disciplines with the proper method of inquiry, for it was only through dialectical reasoning that any of the subjects treated by other disciplines could be unfolded.¹⁰⁸

The Roman senator Cassiodorus devoted a chapter of the second Book of the *Institutiones divinarum et saecularium litterarum* to the question on the epistemological status of dialectic – a term that he considered and used as a synonym of logic –, namely whether this discipline was an art or a science. In the opening lines of the second book of the *Institutiones*, the reader was introduced to the Aristotelian bipartition of philosophy into theoretical (*inspectiva*) and practical (*actualis*), which left logic out of the philosophical realm. Subsequently, Cassiodorus illustrated the intellectual habits, namely *ars* and *disciplina*, proper to speculative and practical philosophy. While *ars* was concerned with contingent things, which can be otherwise than they are, the *disciplina* speculated on immutable, necessary things. This demarcation between art and science (*disciplina*), commented the Roman senator, had its origin in Plato and Aristotle.¹⁰⁹ Conceivably, here Cassiodorus referred to the renowned Platonic distinction between science (ἐπιστήμη) and opinion (δόξα), which is presented in the *Republic* (VI, 476A-480A), and mainly to the Aristotelian partition of the different habits of the rational part of the soul into science, art, practical wisdom, philosophic wisdom and comprehension. Indeed in

¹⁰⁸ Capella, *De Nuptiis*, bk. IV, 336-7, p. 108 (*Id., The Marriage*, p. 110).

¹⁰⁹ “Inter artem et disciplinam Plato et Aristoteles opinabiles magistri saecularium litterarum, hanc differentiam esse voluerunt, dicentes artem esse habitudinem operatricem contingentium, quae se et aliter habere possunt; disciplina vero est quae de his agit quae aliter evenire non possunt” (Cassiodorus, *Institutiones*, bk. 2, ch. 3.20, p.130). This differentiation is also found in Isidore of Sevilla, *Etymologiae* I.1.1.

the sixth book of the *Nicomachean Ethics* Aristotle had stated that science is the state or disposition whose objects of inquiry are “things that are of necessity in the unqualified sense”, and that “every science is thought to be capable of being taught”. In contrast, art was the “state of capacity to make, involving a true course of reasoning” and “concerned with what can be otherwise”.¹¹⁰ Cassiodorus employed the distinction between art and science in attempting to solve the puzzle of the undefined, intermediate status of ‘dialectic’. Thus, he claimed that dialectic is an art, the *ars disputandi*, insofar as it deals with contingent, probable items that are known through probable reasoning, which produces mere opinion about the inquired objects (*quid verisimile atque opinabile*). Dialectic, though, was also a science (*disciplina*) since it could elaborate apodictic arguments for knowing necessary, immutable things.¹¹¹

One of the main channels through which the idea of the equivalence of the disciplines of dialectic and logic was spread through the Early Middle Age was Isidore of Sevilla’s *Etymologies*. In the second book of his writings, Isidore firstly proposed the Stoic tripartition of philosophy into physics (*naturalis*), ethics (*moralis*) and logic (*rationalis*) and soon thereafter introduced the alternative Peripatetic subdivision of philosophy into theoretical and practical sciences. Accordingly, he presented both the contrasting Stoic and Aristotelian descriptions of logic/dialectic which, portrayed a confused, blurred image of logic. From the Stoic perspective logic was indeed the branch of philosophy concerned with speech – later named *scientia sermocinalis* – which Plato had subdivided into dialectic and rhetoric, as Isidore asserted. Logic, however, was not only a *scientia sermocinalis*, but also a *scientia rationalis*, as emerged from the etymological analysis of the term ‘logic’: the Greek

¹¹⁰ Aristotle, *Nicomachean Ethics*, VI.3, 1139b19-24; VI.4, 1140a10-16, in J. Barnes, *Complete Works*, vol. 2, pp. 1799-1800. See also Aristotle, *Posterior Analytics*, II.19.

¹¹¹ “Nunc ad logicam, quae et dialectica dicitur, sequenti ordine veniamus. Quam quidam disciplinam, quidam artem appellare maluerunt, dicentes, quando apodicticis, id est veris disputationibus aliquid disserit, disciplina debeat nuncupari; quando autem quid verisimile atque opinabile tractat, nomen artis accipiat. Ita utrumque vocabulum argumentationis suae qualitate promeretur. Nam et pater Augustinus, hac credo ratione commonitus, grammaticam atque rethoricam disciplinae nomine vocitavit, Varronem secutus; Felix etiam Capella operi suo de Septem Disciplinis titulum dedit. Disciplina enim dicta est, quia discitur plena; quae merito tali nomine nuncupatur, quoniam incommutabilis illis semper regula veritatis obsequitur” (*Cassiodori Senatoris Institutiones*, ed. by R.A.B. Mynors, Oxford: Clarendon Press, 1937, bk. 2, ch. 3.1, p. 109; Engl. tr. in *Id., Institutions of Divine and Secular Learning and On the Soul*, Engl. tr. by J. W. Halporn, Liverpool: Liverpool University Press, 2004, p. 188).

word λόγος was equivocal and meant “both ‘utterance’ (*sermo*) and ‘reason’ (*ratio*)”. Insofar as it was the rational (*rationalis*) part of philosophy, logic/dialectic was concerned with “investigating the causes of things [...] defining, questioning, and discussing” and with “how the true and the false may be distinguished by disputation”. A few lines later, without giving any further insight Isidore set forth the Peripatetic view of logic, which did not classify logic/dialectic amongst the sciences: “Some of the earliest philosophers had ‘logic’ among their terms, but they did not refine it to the level of skill of an art. After these, Aristotle brought the argumentative methods of this discipline under certain rules and named it ‘dialectic’ (*dialectica*) because in it one disputes about terms (*dictum*), for λεκτόν means ‘utterance’ (*dictio*). Dialectic follows the discipline of rhetoric because they have many things in common”.¹¹²

Although the use of the word ‘dialectic’ for denoting ‘logic’ in general appears preponderant in these encyclopaedical writings – and likewise in the Early Medieval texts – it is nevertheless remarkable to note the absence of any terminological precision in the description of ‘dialectic’ conveyed by Late Ancient scholars. Analogously to their Early Medieval successors, indeed Late Ancient writers often employed the notions of *logica* and *dialectica* interchangeably and without assigning to them specific and strict technical senses. This ambiguity at the linguistic level originated from the deeper ambiguity at the conceptual level. The boundaries between logic and dialectic were indeed blurred and their respective fields of

¹¹² “Dialectica est disciplina ad disserendas rerum causas inventa. Ipsa est philosophiae species, quae Logica dicitur, id est rationalis definiendi, quaerendi et disserendi potens. Docet enim in pluribus generibus quaestionum quemadmodum disputando vera et falsa diiudicentur. Hanc quidam primi philosophi in suis dictionibus habuerunt; non tamen ad artis rede gere peritiam. Post hos Aristoteles ad regulas quasdam huius doctrinae argumenta perduxit, et Dialecticam nuncupavit, pro eo quod in ea de dictis disputatur. Nam λεκτόν dictio dicitur. Ideo autem post Rhetoricam disciplinam Dialectica sequitur, quia in multis utraque communia existunt [...] Philosophiae species tripartita est: una naturalis [...] altera moralis, quae Graece Ethica dicitur [...] tertia rationalis, quae Graeco vocabulo Logica appellatur, in qua disputatur quemadmodum in rerum causis vel vitae moribus veritas ipsa quaeratur [...] Logicam, quae rationalis vocatur, Plato subiunxit, per quam, discussis rerum morumque causis, vim earum rationabiliter perscrutatus est, dividens eam in Dialecticam et Rhetoricam. Dicta autem Logica, id est rationalis. λόγος enim apud Graecos et sermonem significat et rationem [...] Item aliqui doctorum Philosophiam in nomine et partibus suis ita definierunt: Philosophia est divinarum humanarumque rerum, in quantum homini possibile est, probabilis scientia. Aliter: Philosophia est ars artium et disciplina disciplinarum” (Isidorus Hispalensis, *Etymologiarum*, II.22.1-24.9; *Id., The Etymologies*, pp. 79-80). For the Stoic and Aristotelian alternatives subdivision of philosophy proposed by Isidore see supra fn. 90.

inquiry often overlapped and were confused with each other. Moreover, the answers of the encyclopaedists to the issue of the place of dialectic in the system of liberal arts were equivocal, as with their treatment of its epistemological status, since dialectic was considered both an *ars* and a *disciplina*.¹¹³ Terminological consistency and conceptual precision were not peculiar to the Late ancient and Early Medieval epochs, since they had inherited a confusing concept of dialectic/logic that resulted from the conflation of two diverse traditions, namely the Peripatetic and the Stoic. This situation changed once Aristotle reappeared on the philosophical scene – firstly obliquely through Boethius, and then directly – as Aristotle brought along his subdivision of sciences and his classification of the habits of the soul.

2.1.3 In some of his commentaries on Greek and Latin logical writings, Boethius provided a rather exhaustive, but still ambiguous picture of dialectic/logic. Let our eyes linger on this representation, as it might help us bring together the various elements addressed thus far. The elucidation of the opening lines of the Ciceronian *Topica*, offered to Boethius the opportunity to classify the distinct senses which his predecessors assigned to the words ‘logic’ and ‘dialectic’.¹¹⁴ This elucidation, however, presupposed a preceding clarification of the inner structure of logic and of the place it occupied in the division of science. Similarly to Cicero, Boethius explained that Aristotle had comprehended both discovery and judgment (*inveniendi iudicandique peritia*) under the general heading ‘logic’ and that he had limited the use of ‘dialectic’ to the logic of the probable. Whereas the Stoics had embraced the judicative branch of logic, on which they had focused, under the term ‘dialectic’:

The *ratio disserendi* has two parts, one of discovery and the other of judgment – sometimes judgement of the discovery itself, sometimes judgement of the

¹¹³ These were not the only problems concerning logic. As de Rijk has pointed out, and as emerges from Cassiodorus’ description of dialectic, there were other questions left open such as whether the subject of logic “is something accidental or unchangeable Reality”, or in other words whether the *ars sermocinalis* was concerned “with words or with Reality” (Garlandus Compotista, *Dialectica*, ed. by L. M. de Rijk, Assen: Van Gorcum, 1959, p. LII).

¹¹⁴ On Cicero’s text see *supra*, pp. 45-46; on Boethius’ division see: F. Magnano, “Boethius: the Division of Logic”, in Brumberg-Chaumont, *Ad notitiam ignoti*, pp. 141-171.

deduction of the discovery, which is the form of an argumentation. The part that teaches about the discovery supplies in abundance certain tools for discoveries and is called 'Topics' [...] The part that has to do with judgment proffers certain rules making determinations and is called 'Analytics'. If it makes observations about the junctures of propositions, it is named 'Prior Analytics'. But if it deals with the discoveries themselves, then the part that discusses the determining of necessary arguments is named 'Posterior Analytics', and the part that discusses false and tricky (that is, sophistical) arguments is named 'Refutations'. The judgment of verisimilar argumentations is apparently not dealt with [...] The Stoics call it [*scil.* the *ratio disserendi*] dialectic, and for them it consists in expertise in judging. Plato called it by the same name and understood it as skill at portioning by differentiae and reducing to a genus. Aristotle used the same name, only he applied it not to the whole art of discourse as the Stoics do but only to the part that deduces verisimilar arguments (*verisimilibus argumentibus*) for a question put forward. Aristotle, therefore, dealt with logic more completely since he discussed the two parts of logic (besides which there is no third), namely discovery and judgement, whereas the Stoics neglected discovery and transmitted only tools for judgment.¹¹⁵

Boethius seemed to stick to the Aristotelian intrinsic partition of logic, and accordingly he could disambiguate the terms 'logic' and 'dialectic' and use them consistently. He employed the general term 'logic' (*disciplina logica* or *scientia disputandi*) to signify the discipline dealing with the rules for discriminating between truth and falsehood and for producing both necessary and probable reasoning, whilst he restricted the meaning of 'dialectic' to the area of logic concerned with

¹¹⁵ Anicius Manlius Severinus Boethius, *In Topica Ciceronis Commentaria*, in *M. Tullii Ciceronis opera quae supersunt omnia ac deperditorum fragmenta*, ed. by J. K. von Orelli – J. G. Baiter, Zürich, 1833, vol. V, I, I.2.6-2.7, pp. 273-6 (Engl. tr. in E. Stump, *Boethius' In Ciceronis Topica*, Ithaca-London: Cornell University Press, 1988, pp. 25-28, here pp. 27-28). In the *De Topicis Differentiis*, Boethius offered a *résumé* of the length passage mentioned (bk. 1, *Patrologia Latina*, vol. 64, 1173C). However, he then proposed a slightly different quadripartition of logic into four disciplines, namely dialectic, rhetoric, demonstrative philosophy and sophistry". The discipline called *Topica* will "reveal a bountiful supply of arguments" to the 'artisans' of these four disciplines, thus paving "the paths of discovery": "Not only the dialectician and the orator but also the demonstrator and producer of true argumentation have something they can take from the Topics since among the Topics of readily believable arguments this teaching contains also the starting points of necessary arguments [...] occasionally certain sophistical Topics are brought up for the sake of exercising the reader" (bk. 1, *Patrologia Latina* vol. 64, 1181A-D; E. Stump, *Boethius' De topicis differentiis*, Ithaca and London: Cornell University Press, 1978, pp. 41-42).

probable argumentation.¹¹⁶ In his second commentary on Porphyry's *Isagoge*, Boethius directly faced the crucial problem concerning the nature of logic and its place in the system of philosophy. The question about the epistemological status of logic originated from the different places assigned to logic in the Peripatetic and Stoic partitions of philosophy: was logic a science, namely a part or branch of philosophy, as the Stoics thought? Or did logic serve as an instrument of philosophy (*an omnino pars quaedam sit philosophiae an suppellex atque instrumentum*), as assumed by Aristotle? Boethius offered a Solomonic solution to the problem, which later revealed itself to be troublesome and puzzling. He explained that logic was both a part of and an instrument of philosophy. Since it inquired about the rules for discovering the truth, logic could serve as instrument for theoretical and operative sciences in their search for truth and in the systematization of scientific knowledge.¹¹⁷ At the same time, logic was a science insofar as it had its own principles and laws and its own subject matter; its parts were the discovery or *inventio* and the judgement or *iudicium*. "Discovery is the matter" for the forms, which are definition, division and deduction,¹¹⁸ "but the whole division itself furnishes the matter for judgment". Indeed, once the hylemorphic composite, that is the argumentation, is produced, judgement operates. One way of judging consists in determining and judging "the nature of the propositions themselves – whether they are true and necessary, whether they are verisimilar, or whether they are used in sophistries. This is a contemplation of "the matter" of argumentations. The other way, however, considers the junctures and composition of the propositions among

¹¹⁶ Anicius Manlius Severinus Boethius, *In Isagogen Porphyrii commentorum editio secunda*, S. Brand, in *Anicii Manlii Severini Boethii operum pars I: in Isagogen Porphyrii commenta*, ed. by G. Schepps - S. Brandt, Corpus Scriptorum Ecclesiasticorum Latinorum 48, Vindobonae-Lipsiae: F. Tempsky - G. Freitag, 1906, bk. 1, ch. 2, pp. 138-140. While for Aristotle 'probable' qualified the 'matter' of the premises of dialectical deductions, for Boethius probability is a quality of the whole argument, and not only of some of its components.

¹¹⁷ *Ibid.*, ch. 3, pp. 140-143.

¹¹⁸ "Discovery is the basis for or the others [*scil.* divisions of logic, namely definitio, partitio, collectio], holding the place, as it were, of their matter [...] without discovery there cannot be deduction, and so there will no be the necessary, the verisimilar, or the sophistical, for these three are added to discovery so that an argument becomes necessary, readily believable, or sophistical. Necessity, ready believability, and sophistry are forms (*formae*) of a sort; when they come to discoveries, they make arguments necessary, readily believable or sophistical" (Boethius, *In Topica*, 2.07, p. 274; Stump, *In Topica*, p. 26).

themselves, and it is a part of judgement. This way judges “the form” of arguments”.¹¹⁹

Boethius played a prominent role as cultural mediator between the Ancient and Medieval epochs by conveying the classical intellectual heritage to the Middle Ages. He pervaded almost all branches of knowledge, especially logic, through his translations and writings.¹²⁰ Boethius was “le maître de logique” of intellectuals during the High Middle Ages, but nonetheless his views on logic – about its status

¹¹⁹ Boethius, *In Topica*, 2.07, 1047A; Stump, *In Topica*, p. 27; on this topic see Magnano, “Boethius”. For a precise sketch of the hylemorphical composition of deductions in Boethius, and the differences in the usage of the conceptual pair matter-form between Boethius and Greek Commentators see Brumberg-Chaumont, “Les divisions de la logique selon Albert le Grand”, in Brumberg-Chaumont, *Ad notitiam ignoti*, pp. 336-416, esp. pp. 343-352.

¹²⁰ Lorenzo Minio Paluella identifies three phases in the spread of ancient logical writing during the Western Middle Ages: 1) end 8th-beginning 10th century; 2) years 970-1040; 3) beginning-middle 12th century. During the first stage (end 8th-beginning 10th century), the following texts were known: Porphyry’s *Isagoge* translated by Boethius, along with the two Boethian commentaries on that text; Aristotle’s *Categoriae*, and Boethius’ commentary on it; Aristotle’s *De interpretatione* according to Boethius’ translation, accompanied by the second Boethian commentary on it; the *Categoriae Decem* attributed to Augustine; (Ps-) Apuleius’ *Periermeneias*; Boethius’ first commentary on Aristotle’s *De interpretatione*; Cicero’s *Topica* and Boethius’ incomplete commentary on it. In the second stage (970-1040) were rediscovered Boethius’ logical treatises: the *Prolegomena/Antipredicamenta*, then edited as *Introductio in Syllogismos Categoricos*; the *De syllogismo categorico* and the *De syllogismo hypothetico*; the *De divisione* and the *De topicis differentiis*; Boethius’ complete and revised translation of Aristotle’s *Categoriae*; a fragment of an anonymous translation of Aristotle’s *Topics* (IV.2, 122a10-b24). Porphyry’s *Isagoge*, Aristotle’s *Categoriae* and *De interpretatione*, Cicero’s *Topica* together with the Boethian commentary on it, Boethius’ monographies and, later, the *Liber sex Principiorum* constituted the so called *logica vetus*. During the last phase, the recovery of Latin translations of Aristotelian works prior to 525 BC occurred. Around 1115 began the circulation of Boethius’ translations of the *Sophistici Elenchi*, *Topica*, *Analytica Priora* (both the *recensio Carnutensis* and the *recensio Florentina*). At the latest around 1150, James of Venice translated from Greek the *Analytica Posteriora* and translated, anew or merely modifying a previous translation, the *Sophistici Elenchi*; it is uncertain whether he also translated the *Analytica Priora* and the *Topica*. Shortly thereafter, an unknown John translated again from Greek into Latin the *Analytica Posteriora* and an anonymous translated the *Analytica Priora* and the *Topica*. In the 60s of 12th century, Gerard of Cremona translated from Arabic into Latin the *Analytica Posteriora*, along with Themistius’ paraphrasing of it. Aristotle’s *Prior and Posterior Analytics*, *Topics* and *Sophistical Refutations* constituted the *logica nova*. Both *logica vetus* and *nova* were part of the so called *logica antiqua*, in opposition to the modern logic, whose bulk were the *parva logicalia* (L. Minio Paluella, “Nuovi impulsi allo studio della logica: la seconda fase della riscoperta di Aristotele e di Boezio”, in *La scuola nell’Occidente Latino dell’ Alto Medioevo*. 15-21 Aprile 1971, vol. II, Spoleto: Centro Italiano di Studi per l’Alto Medioevo, 1972, pp. 743-766, here pp. 747-749); see also O. Lewry “Boethian Logic in the Medieval West”, in M. T. Gibson, *Boethius: His life, Thought and Influence*, Oxford: Blackwell, 1981, pp. 90-134; J. Marenbon, “Logic at the Turn of the Twelfth Century: a synthesis”, in I. Rosier-Catach, *Arts du langage et théologie aux confins des XIe-XIIIe siècle: conditions et enjeux d’une mutation*, Turnhout: Brepols, 2011, pp. 181-217. For a more exhaustive picture also addresses the translations of Ancient Greek and Arabic commentaries on Aristotle’s *corpus* see B. Dod, “Aristoteles Latinus”, in N. Kretzmann – A. Kenny – J. Pinborg – E. Stump, *The Cambridge History of Later Medieval Philosophy*, Cambridge: Cambridge University Press, 1988, pp. 45-79. On Boethius’ translation see *infra* ch. 5.1.2.

and place within the classification of science – as well as the lexical exactness and conceptual precision peculiar to his works, did not influence the Early Medieval period considerably. Major figures of the Carolingian Renaissance, such as Alcuin¹²¹ and Hrabanus Maurus,¹²² and later authors, such as Remy of Auxerre, repeated the descriptions of dialectic supplied by late Ancient encyclopaedists – like Capella, Cassiodorus and Isidore – which carried with them not only a terminological and conceptual oscillation between logic and dialectic, but also uncertainty concerning the nature and the status of ‘dialectic’/‘logic’.¹²³

2.1.4 The turn of the first millennium displayed a heightening interest in Boethius’ views, which was perhaps an outgrowth of the recovery of his logical treatises.¹²⁴ Dialectic/logic assumed an ever more pivotal role in the didactic system and in the systematization of knowledge in general, since it was considered the most efficient tool for searching and organizing all branches of wisdom (grammatical, legal, theological). The attention towards Boethius became accentuated as we move into the 12th century.¹²⁵ Consequently, the discussions about logic increasingly run

¹²¹ *De rhetorica et virtutibus Dialogus* (PL 101, 948).

¹²² *De institutione Clericorum*, III, 20 *De Dialectica* (PL 397-8).

¹²³ On dialectic in the High Middle Ages see: J. Marenbon, *From the Circle of Alcuin to the School of Auxerre. Logic, Theology and Philosophy in the Early Middle Ages*, Cambridge: Cambridge University Press, 1981; D’Onofrio, «*Fons scientiae*»; J. Fried, *Dialektik und Rhetorik im früheren und hohen Mittelalter. Rezeption, Überlieferung und gesellschaftliche Wirkung antiker Gelehrsamkeit, vornehmlich im 9. Und 12. Jh.*, München: Oldenburg, 1997; on the *trivium* see Y. Iwakuma, “The Division”.

¹²⁴ Gerbert of Aurillac and Adalbero of Laon, to whom is attributed the authorship of the *De divisione philosophiae eiusdem*, elaborated “a unique subdivision of *logica*, that into *dialektike*, *epideiktike* (!), and *sophistike* [...] In some other texts from the *aetas Boethiana* too, *logica* is used in its Boethian sense [*scil.* ‘logic’ in the modern sense] [...] Another treatise uses the term *logica* almost as an equivalent to *dialectica* (eam nunc dici dialecticam quae olim logica dicta est)” (Iwakuma, “The Division”, pp. 171-172). In some 11th century grammatical texts, the whole *logica* is characterized as *sermocinalis*, namely as dealing – in different ways – with the *sermo* or *vox*, and tripartite into *grammatica*, *dialectica* and *rhetorica*. This tripartite division “came to be widely adopted in one way or another in later texts [...] By the late eleventh century, several divisions of *logica* and/or *dialectica* had been proposed” (*Ibid.*, p. 173). Iwakuma has remarked on a common feature of theories about the subdivision of *logica/dialectica* shared by some commentaries on the *logica vetus*, namely their concord in identifying the *scientia inveniendi* with Boethius’ *De topicis differentiis* and the *scientia iudicandi* with the Boethian *De syllogismis categoricis* and *De syllogismis hypotheticis*. And the discrepancies between these writings concerned the place to assign to the *Isagoge*, *Categories*, *On the Interpretation* and *On the Division* (*Ibid.*, p. 175).

¹²⁵ Regarding the use of the term *logica* and *dialectica* during this period, Michaud-Quantin states that “au X^e s. et au début du XII^e, l’emploi de *dialectica* est universel pour désigner la discipline qui dirige l’exercice de la raison, discerne le vrai du faux: le terme *logica* n’est pas oublié, mais il reste abstrait” (Michaud-Quantin, “Les termes *logica* et *dialectica*”, p. 856). In his *Didascalicon* (end of 1120s), Hugh of St Victor distinguished between ‘linguistic logic’ (*logica sermocinalis*) and ‘dialectic’ or ‘argumentative logic’ (*dialectica* and *logica rationalis* or *dissertiva*). ‘Linguistic logic’ was one of the four

within the contours of the Aristotelian-Boethian conceptual framework conveyed to Medieval authors by the texts compounding the *logica vetus*. Logic became even more important, and attracted “such tremendous crowds from every quarter that more men [we]re occupied in the study of logic alone than in all other branches of that science which regulates human acts, words, and even thoughts”.¹²⁶ The outstanding status of logic in the educational program, and its influence upon other disciplines was firmly established. Newly rediscovered ancient texts started circulating, including some of the books of the Aristotelian *Organon* that were later called the *logica nova*, such as the *Topics*. The prologue that the 12th century anonymous translator of the *Topics* placed ahead of his translation of the text, which was accomplished before 1125, bears testimony to this intellectual renewal. Therein, indeed, the translator supplied some information not only about the content of the eight books of the *Topics*, but also on its troubled textual history:

Formerly, Aristotle's *Topics* were rendered into Latin by the guide of the Latins, Boethius the philosopher. But for an unclear and extremely execrable coincidence, the Boethian translation fell into oblivion. Now, though, a translation of the Aristotelian *Topics* is available again, however it might be.

Those who are interested in logical studies could consider it, if they wish.¹²⁷

general branches of philosophy, together with the theoretical, practical and mechanical arts (the term ‘art’, which he considered equivalent to science). Since it taught the rules for speaking and arguing correctly, “linguistic logic stands as genus to grammar, dialectic, and rhetoric, thus containing argumentative logic as subdivision”. ‘Dialectic’ or ‘argumentative logic’, which was a species of the linguistic logic, prescribed the rules for distinguishing the true from the false by reasoning” (Hugh of St. Victor, *The Didascalicon*, 31.11, p. 59; more than a century later, Robert Kilwardby quoted this passage in the *De ortu scientiarum*). Moreover, Hugh specified the inner articulations of such a dialectic. The genus ‘argumentative logic’ was composed of two integral parts, namely invention and judgement, which in turn were features proper to the three intermediate species of argumentative logic – namely demonstration, probable argument, sophistic – falling under the species ‘argumentative logic’. ‘Probable arguments’ were the subject matter of dialectic and rhetoric, both of which contained invention and judgement, which however were not “the same thing in dialectic that they are in rhetoric” (Hugh of St. Victor, *The Didascalicon*, 2.30, pp. 81-82).

¹²⁶ Ioannis Saresberiensis, *Metalogicon*, ed. by J. B. Hall-K. S. B. Keats-Rohan, Turnhout: Brepols, 1991, bk. 2, ch. 6, p. 63; Engl. tr. in D. D. McGarry, *The Metalogicon of John of Salisbury: a twelfth-century defense of the verbal and logical arts of the trivium*, Berkeley: University of California Press, 1955, p. 69.

¹²⁷ “Hec itaque Aristotelica a latinorum duce et philosopho S. Boetio in latinam eloquentiam aliquando deducta, sed incertum quo nefandissimo casu oblitterata, nunc vero recidua translatione utcumque reddita, quos talia studia delectant, si volunt, inspiciant (nisi forte nullam qualicumque translationi preferendam iudicent; et nisi eos sani capitis autument, si qui sunt qui inedia ac nuditate malint perire quam escis aut indumentis grossioribus uti)” (L. Minio-Paluello, “Note sull’Aristotele latino medievale”, in *Rivista di filosofia neo-scolastica* 52 (1969), pp. 29-45, here p. 41). As Minio-Paluello

Almost thirty years later, similar words were written by John of Salisbury. In his praise of the Aristotelian *Topics* in the third book of the *Metalogicon*, John voiced surprise that such a useful text “had completely, or almost entirely, fallen into disuse” for centuries:

At length, however, in our day, through the insistent researches of diligent geniuses, it has, as it were, been raised from the dead, or aroused from sleep, so that it may summon back to their sense those who have been wandering, and make plain the way of truth to those who have been seeking it.¹²⁸

Furthermore, John offered a picture of the logical studies prevalent at the time he was writing his work. Around the 50s of the 12th century, ‘the body of the [logical] art’ was mainly compounded by the Aristotelian *Topics*, whose knowledge John considered “the most necessary, especially for those whose aim is [to prove with] probability”, the *Analytics*, and the *Sophistical Refutations*. In these texts, affirmed John, a scholar could find teachings applicable in demonstration, dialectic, and sophistry and which would allow him to master “invention and judgement in every branch of knowledge”.¹²⁹

The old books educated the new men. The recovery of unknown Boethian, Aristotelian as well as Arabic volumes was flanked by a proliferation of logical writings in which school masters expressed fresh ideas. These textbooks disclose the

has pointed out, the translator’s short summary of the *Topics* “si può paragonare a quello molto più ampio, ma certamente più tardo, e basato sulla versione boeziana, contenuto nel libro IV[sic]. 5-10 del *Metalogicon* di Giovanni di Salisbury (1159)” (Minio-Paluello, “Note sull’Aristotele”, p. 42).

¹²⁸ McGarry, *The Metalogicon*, p. 172.

¹²⁹ Subsequently, John expressed his preference for the *Topics*, whose science “chiefly builds up our power of invention, it also assists our judgment in no small measure [...] it is of greatest service to the dialectician and the orator, I believe that it is almost equally helpful to those who are engaged in the weighty labors of demonstration, or involved in sophistic fallacy and strife [...] The *Analytics* and the *Sophistics* are also useful in invention; while the *Topics*, on their part, likewise aid in judgment” (John of Salisbury, *The Metalogicon*, bk. 3, ch. 5, pp. 171-172; from ch. 5 until the end of the 3rd book, John offers an overview of the content of the eight books of the *Topics*). John’s words are also telling indicators of the tendency to apply to logic the Aristotelian quadripartition of arguments into demonstrative, probable, tentative and sophistic, which was accordingly subdivided into four parts or disciplines, namely the demonstrative, dialectic, tentative or eristic and sophistry.

ongoing process of terminological definition and conceptual refinement of the notions of 'logic' and 'dialectic'. Indeed the usage of these terms became less oscillating and gradually standardized. This progressive crystallization at the lexicological level, however, was an epiphaenomenon whose hypophaenomenon was to be found in the gradual definition of the logical and dialectical realms. The fields of research of and the relation between logic and dialectic were more clearly established, and their respective subject matters, principles, rules and methods of inquiry were more defined. On the basis of the etymological interpretation of the equivocal Greek term λόγος – which according to Latin authors could signify 'speech, discourse' (*sermo*) as well as 'reason' (*ratio*) – 'logica' was considered as both the *scientia* or *ars sermocinalis*, and the *scientia* or *ars rationalis* or *dissertiva*. Insofar as it was the discipline concerned with speech, logic was typically understood as the general discipline that comprehended the trivial arts. While inasmuch as it dealt with concepts and reasoning, 'logica' was generally considered the genus under which fell the species 'dialectica'.¹³⁰ Furthermore, logic was considered an integral whole whose integral parts were the judicative and the inventive. This intrinsic process of definition of logic/dialectic was mirrored by the external process of differentiation between logic and other arts and science, such as grammar, rhetoric and theology.¹³¹ Despite this, however, the epistemological status of logic and its place within the sciences could not be unequivocally defined, and neither the Aristotelian nor the Stoic divisions of philosophy imposed itself upon the other.

One of the outstanding intellectual figures of the 12th century, Peter Abelard, openly refuted the widely-accepted tripartition of logic into grammar, dialectic and

¹³⁰ In the following century, Robert Kilwardby mentioned this distinction in the opening of the chapter of the *De ortu scientiarum*, which introduced the nature of logic: "Regarding logic, it is important to know that its very nature is equivocal. For, as Hugh of St. Victor says in his *Didascalion*, the name ['logic'] is taken from the Greek name 'logos', which among the Greeks signifies both speech and reason and so is equivocal among them. And so among us logic is in one sense a science of discourse, and in that sense it includes grammar, rhetoric, and logic properly called; in the other sense it is a science of reason, and in that sense it is a science belonging to the *trivium*, distinguished from grammar and rhetoric" (R. Kilwardby, *De ortu scientiarum*, ed. by A. G. Judy, Toronto: PIMS, 1976, pp. 167-168, Engl. tr. in N. Kretzmann – E. Stump, *The Cambridge Translations of Medieval Philosophical Texts*, Cambridge (Mass.): Cambridge University Press, 1988, 3vols., vol. 1, pp. 264-282, here pp. 264-265).

¹³¹ According to Garin, "lo sforzo dei logici dal XII secolo in poi era stato quello di determinare l'ambito della *dialettica* come *ars disserendi*" (E. Garin, "Dialettica e retorica", pp. 46-50).

rhetoric which had been adopted by many nominalist, vocalist and realist authors since the end of the 11th century. This tripartition presupposed that the subject matter of logic was human speech (*sermo*) and implied that the *scientia sermocinalis*, namely logic, was distinct from dialectic.¹³² Abelard preferred instead the Stoic tripartition of philosophy according to which logic was the *scientia rationalis*.¹³³ At the beginning of both the *Logica 'Ingredientibus'* and the *Logica 'Nostrorum petitioni sociorum'*,¹³⁴ the Palatin Master followed *verbatim* Boethius in stating that logic was one of the three parts of philosophy. Specifically, it was the rational science that taught how to find arguments, distinguish valid from invalid arguments, and what were the techniques of disputation. Abelard further aligned himself with Boethius in acknowledging the instrumental role of logic. This discipline served as a universal tool for any philosophical inquiry since it equipped other sciences, and also logic itself, with the rules for arguing correctly.¹³⁵ The idea that logic was the science

¹³² Iwakuma, "The Division", pp. 176-178. On the basis of his attribution of the paternity of glosses on Boethius *De topicis differentiis* – found in the ms. Paris BNF, lat. 7094A fol. 82-95 – to the young Abelard, Iwakuma claimed that "Abelard had earlier made concessions to the new tripartite division of *logica*. According to the glosses, *logos* has a two-fold etymology, *ratio* and *sermo*, and if *logos* is interpreted as *sermo*, then *logica* would contain grammar and rhetoric as well as dialectic [...] In the end, however, Abelard sticks to the traditional characterization of *dialectica* as *scientia rationalis* and rejects the idea of *dialectica* as *scientia sermocinalis*" (*ibid.*, pp. 178-179).

¹³³ In the introduction to the edition of the *Dialectica*, De Rijk claimed that "for Abelard logic is *ars sermocinalis*, i.e. the art of the use of language, in the large sense of the word". However, as he pointed out in the related footnote, the term *ars sermocinalis* "is missing from Abailard's writings; it occurs with his contemporary Theodoric of Chartres (†before 1155) who calls the arts of the trivium *artes sermocinales* (MS. Carnot, 497 f1r). I found the term '*scientia sermocinabilis*' in the *Dialectica* of Garland" (L. M. De Rijk in *Petrus Abaelardus: Dialectica*, Assen: Van Gorcum 1970², I, p. xci, fn. 4). Perhaps, the absence of this term, *ars sermocinalis*, is due to the doctrinal choice of Abelard. In the *Dialectica*, logic's primary task is to distinguish between valid and invalid arguments and to give reason for their validity or invalidity, and, secondarily, to discovery truth (De Rijk, *Dialectica*, I, pp. 73,3-5; 99,10-21; 114,16-31; III, 388,11-20).

¹³⁴ The *Logica 'Ingredientibus'* (ante 1118) contains Abelard's commentaries on the *Isagoge*, *Categories* (both edited by B. Geyer, 1) the *Isagoge* in *Beiträge zur Geschichte der Philosophie und Theologie des Mittelalters* 21 (1), Munster: Aschendorff, 1919; 2) the *Categories* in *Beiträge zur Geschichte der Philosophie und Theologie des Mittelalters* 21 (2), Munster: Aschendorff, 1921), *De interpretatione* (edited by K. Jacobi – C. Strub in the series *Corpus christianorum continuatio mediaevalis*, vol. 206, Turnhout: Brepols, 2010), and the *De topicis differentiis* (edited by M. Dal Pra in *Pietro Abelardo: Scritti di logica*, Firenze: La nuova Italia, 1969²); the *Logica 'Nostrorum petitioni sociorum'* is a commentary on Porphyry's *Isagoge* (1124ca; it was published by B. Geyer in *Beiträge zur Geschichte der Philosophie und Theologie des Mittelalters* 21 (4), Munster: Aschendorff, 1933); the *Dialectica* is a logical textbook dealing with the topics treated by Boethius in his logical writings and by the treatises *De Definitionibus* (De Rijk, *Dialectica*).

¹³⁵ Cf. *Logica ingredientibus*, in *Beiträge* 1919, pp. 1-3, where the three parts are the *speculativa*, *moralis* and *rationalis*; *Logica 'Nostrorum petitioni sociorum'*, in *Beiträge* 1933, pp. 505-506, esp. p. 506. It should be noted that in the *Logica Nostrorum*, Abelard preliminarily divided the *scientia in agendi*, consisting "in rerum compositione" and *discernendi*, which consists "in rerum compositarum discretione". The

committed to reasoning and disputing did not allow place for any trivial arts within logic.¹³⁶ Grammar, rhetoric and dialectic were not parts of logic. Its principal parts were the inventive and judicative alone, as stated by Cicero and Boethius. The Palatin Master refined this principal division of logic by subdividing the inventive part into division and definition, and by attaching the *collectio* to the judicative part.¹³⁷

For Abelard, therefore, the term 'dialectica' did not denote any specific species or part of logic, but it rather amounted to 'logica' in general. Consequently, he employed 'logica' and 'dialectica' as synonyms: the title of one of his logical textbook, the *Dialectica*, is telling enough about this Abelardian general attitude.¹³⁸ Notwithstanding his terminological inconsistency, in the *Glossae super Topica* the Palatin Master meticulously followed the technical Aristotelian lexicon, which he found in the Boethian text that he was elucidating. Thus, he utilized 'logic' to signify logic in general, and 'dialectic' to limitedly signify the part of logic concerned with probable reasoning.¹³⁹

A particular passage of the *Logica 'Nostrorum petitioni sociorum'* deserves to be highlighted, since it proposes the differentiation between the theoretical and the practical aspects of logic, which was to remain a common feature of this discipline in subsequent centuries. In the preface to this work, Abelard explicated that the genus *scientia* comprehended two species, the *scientia agendi* and the *scientia*

scientia discernendi alone is called philosophy, therefore the *physica*, *ethica* and *logica* are three parts of the *scientia discernendi*.

¹³⁶ "Cum videlicet grammaticam et rhetoricam omni<no> a philosophia dividamus [...] grammatica est quaestio et illa civilis, id est rhetorica, nec ad supradictas scientias [scil. logicam, physicam, ethicam] attinet, nisi forte secundum eos qui grammaticamque rhetoricam logicae supponunt. Boetius tamen hoc nomen logica non ponit, sed *disserendi ratio* scientiam, quod multo minus applicare potest grammaticae, quae nullo modo disserere, id est argumentari vel disputare docet" (*Super Topica Glossae*, in Pietro Abelardo, p. 290.5-16; cf. also *Logica Ingredientibus* in *Beiträge* 1919, pp. 1-3).

¹³⁷ "Per quam partem vero ad logicam praesentis operis scientia tendat statim dinoscitur, si prius logicae partes diligenter distinxerimus. Sunt autem duae auctore Tullio et Boethio quae logicam componunt, scientia scilicet inveniendi argumenta et diiudicandi, hoc est confirmandi et comprobandi, ipsa inventa" (*Logica ingredientibus*, in *Beiträge* 1919, pp. 10-13, here p. 10; *Logica 'Nostrorum petitioni sociorum'*, in Geyer in *Beiträge* 1933, pp. 506-507 and 510; *Glossae super Topica*, in Pietro Abelardo, pp. 211.38-212.3).

¹³⁸ "Logicam uero idem dicimus quod dialecticam et indifferenter utroque nomine in designatione utimur eiusdem scientiae" (*Logica 'Nostrorum petitioni sociorum'*, in *Beiträge* 1933, p. 506).

¹³⁹ "<Disputatio decurrit> tantum probabilibus <argumentationibus> et dialectica dicitur" (*Glossae super Topica*, in Pietro Abelardo, p. 214, 20-21 and also p. 205.16). It is worth noting that Abelard aligned himself with Boethius in associating 'probability' to the whole argument, while for Aristotle it was a property of the premises of dialectical deductions alone.

discernendi. The *scientia agendi* was concerned with the “*rerum compositione*” and could also be acquired through practice and experience (“*solo usu*”) – it would not be incorrect, perhaps, to equate this practical science to an art. While the *scientia discernendi* was committed with the “*rerum compositarum discretione*”, namely with knowing the causes of things; thus it amounted to philosophy. Accordingly, Abelard restricted the Stoic tripartition of philosophy into *physica*, *ethica* and *logica* to the *scientia discernendi* alone. In this context, he introduced the idea of a twofold science of argumentation, the practical, called *ratiocinativa*, which dealt exclusively with the elaboration and use of arguments, and the theoretical, named *logica*, whose business it was to distinguish between valid and invalid arguments and to explain the reason of an argument’s validity.¹⁴⁰ Perhaps Abelard was not the first Western logician to propose this demarcation between the practical and theoretical aspects of logic, which might well have been elaborated upon by authors of his own or preceding age. Plainly, however, in his words *in nuce* appeared the distinction between *docens* and *utens*, which was applied extensively to logic/dialectic by later generations of scholars from the 13th century onwards.¹⁴¹

¹⁴⁰ “Est autem logica Tulli auctoritate diligens ratio disserendi, id est discretio argumentorum per quae disseritur (id est disputatur). Non enim est logica *scientia utendi argumentis siue componendi* ea sed discernendi et diiudicandi ueraciter de eis, quare scilicet haec ualeant, illa infirma sint. Nemo enim aliter logicam habet nisi uniuscuiusque argumenti uim diiudicare ualeat, cum scilicet is qui illud facit, uim ei exposuerat, quam uim componendo ipse intendit. *Duae itaque sunt argumentorum scientiae*, una componendi quam dicimus *ratiocinativam*, alia discernendi composita quam logicam appellamus. Illa quippe *in usu argumentorum tantum consistit*, quam quivis puer facile sibi per exercitium comparat, ista uero in discretione ac diuisione diiudicatur causarum per quam scilicet assignare sufficimus, quare hoc argumentum sit idoneum ad conclusionem inferendam, id est ita adiunctum, ut per id conclusio sit recipienda, illud uero minime. Hanc autem magis ingenium quam exercitium ministrat” (*Logica ‘Nostrorum petitioni sociorum’*, in *Beiträge* 1933, pp. 506-507; emphasis added).

¹⁴¹ Green-Pedersen faced this question with regards to commentaries on Aristotle’s *Topics*, and proposed to trace its roots back to Abelard, who “in his *Super Topica* (Boethii) glossae explains the same distinction, only he does not say *docens*, but *tractans*” (N. J. Green-Pedersen, “On the interpretation of Aristotle’s *Topics* in the thirteenth century”, in *Cahiers de l’Institut du Moyen-Age Grec et Latin* 9 (1973), pp. 1-46, esp. pp. 14-15, here p. 15). Pedersen refers to *Glossae super Topica*, in *Pietro Abelardo*, pp. 315.8-316.14, here p. 315). Relying on this passage of Pedersen and on Markowski (M. Markowski, *Logika*, in *Dzieje filozofii sredniowiecznej w Polsce* 1, Wrocław: Zakład Narodowy im. Ossolińskich, 1975, p. 58), Ebbesen makes the general claim that “im 12. Jh. findet man statt ‘*docens/utens*’ die Synonyme ‘*tractans/utens*’ und ‘*qui agit de arte/qui agit ex arte*’” (S. Ebbesen, “*Logica docens/utens*”, in *Historisches Wörterbuch der Philosophie* 5 (1980), pp. 353-355. On the *logica* (and *dialectica*, understood in its narrower sense) *docens* and *utens*, see *infra*, § 2.2.2.

When leafing through the folia of logical textbooks and compendia written shortly after Abelard's activity, the doctrinal and terminological similarity is straightforward, and suggests the standardization of a corpus of doctrines about dialectic. The *Introductiones Parisienses*, the *Logica 'Ut dicit'*, the *Logica 'Cum sit nostra'* and the *Dialectica Monacensis*, whose compositions spanned the late 12th and early 13th centuries, show many common features and only minor changes in the elucidation of the nature and various meanings of logic and dialectic, with the usage of the last word predominating. All the anonymous authors of these tracts were conscious of the general and the proper senses of the term 'dialectic'. They agreed that 'dialectic' was commonly employed as synonymous with logic for denoting the science or art aiming at discriminating truth from falsehood. In contradistinction, 'dialectic' was an integral part of logic and was concerned with probable reasoning. Despite these semantic remarks – which show the awareness of these authors about the polisemanticity of 'dialectic' – they still employed 'dialectic' interchangeably with 'logic'. Similarly, they indifferently used art and science when referring to logic/dialectic. discipline. From the prologues of these writings there also emerged the methodological function usually attributed to dialectic in virtue of its usefulness for arguing correctly in almost all disciplinary fields (*ad omnium methodorum principia viam habens*). And, furthermore, from the aforementioned prologues appeared an inchoate delimitation of a proper field of dialectic – understood as intersubjective dialectic, or *ars disserendi* between an opponent and a respondent – and the disputational character of this art:¹⁴²

Dialectic is the art that discerns truth from falsehood, for logic aims at that. And, as Augustine says, dialectic is art of arts and science of sciences, it alone knows how to know, and it alone can make someone knower. Thanks to it every science is perfectly known, without it no science can be perfectly known. Dialectic is so

¹⁴² "They [*scil.* Compendia and textbooks, composed at the end of 11th century, first half of 12th century] are focussed all of them on disputation technique (*ars disputandi*) [...] This view of the task of logic certainly was not new. It is found already in the well-known definition of Cicero, *Top.* II, 6, which circulated in the Middle Ages thanks to Boethius [...] This view was the current one, indeed, in the first half of the twelfth century [...] This view on the task of dialectic was bound to change the arrangement of the subjects to be discussed in those treatises. Already in the Early school of St. Victor we find the discussion of *sonus* and *vox* as starting-point, since they are supposed to be the simplest units in dialectic" (De Rijk, *Logica Modernorum*, vol. II, part 1, pp. 163-165).

named from ‘*dia*’, which means two, and ‘*logos*’, which means discourse (*sermo*) or ‘*lexis*’, which means reason, as if <dialectic> was a dual discourse, since it is led by two people, namely the opponent and the respondent. Properly speaking, then, dialectic differs from logic in the same way that a part differs from its whole; while commonly speaking, dialectic and logic are the same. And we use the term ‘dialectic’ in this latter sense.¹⁴³

From mid-13th century onwards, these words, slightly modified, resounded in the ears of many students who read that dialectic is the art of arts and science of sciences in the prefaces of either Peter of Spain’s *Tractatus* – then called *Summulae logicales* – or one of his commentators.¹⁴⁴

2.1.5 The process of terminological differentiation and conceptual clarification of logic and dialectic received a decisive impulse when the newly available books of the *Organon*, together with the writings of Arabic authors, spread widely and were integrated in the academic syllabus. On the one hand, the wave of newly translated texts supplied Western scholars with novel views about logic, its divisions and place among the other sciences.¹⁴⁵ Logic gradually became specified as a *scientia rationalis*

¹⁴³ “Est autem dialectica ars discernendi verum a falso; ad illud idem est logica. Et, ut Augustino placet, dialectica est ars artium, scientia sceintiarum, que sola novit scire, sola scit scientes reddere, ex qua omnis, sine qua nulla scientia perfecte scitur. Dicitur dialectica a ‘*dia*’, quod est *duo*, et ‘*logos*’ *sermo* vel ‘*lexis*’ *ratio*, quasi *dualis sermo*, quia vertitur inter duo, scilicet opponentem et respondentem. Differt autem dialectica a logica sicut pars a suo toto proprie loquendo; communiter tamen loquendo idem sunt, et sic utimur ea” (*Logica ‘Ut dicit’*, in de Rijk, *Logica Modernorum*, vol. II, part 2, p. 379,15-23). A similar claim is found also in the *Introductiones Parisienses* (de Rijk, *Logica Modernorum*, vol. II, part 2, p. 357,6-20), while the *Logica ‘Cum sit nostra’* (de Rijk, *Logica Modernorum*, vol. II, part 2, p. 417,23-32) and the *Dialectica Monacensis* (de Rijk, *Logica Modernorum*, vol. II, part 2, p. 462,6-16; here it is said that the definition of ‘ars artium scientia scientiarum’ expresses the formal cause of dialectic) does not mention Augustine. De Rijk suggests that the famous definition of dialectic as *ars artium, scientia scientiarum* arrived to these anonymous authors through “an intermediary source, presumably some glossary” (*Logica Modernorum*, vol. II, part 1, p. 439).

¹⁴⁴ For logic as ‘ars artium’ see K. Jacobi, “Dialectica est ars artium, scientia scientiarum”, in I. Craemer-Ruegenberg – A. Speer, *Scientia und Ars im Hoch- und Spätmittelalter*, Berlin-New York: Walter de Gruyter, 1994, vol. 1, pp. 307-328; M. J. F. M. Hoenen, “Ars artium und scientia scientiarum. Logik an den mittelalterlichen Universitäten von Paris und im Alten Reich”, in R. C. Schwinges, *Artisten und Philosophen. Wissenschafts- und Wirkungsgeschichte einer Fakultät vom 13. bis zum 19. Jahrhundert*, Basel: Schwabe & Co., 1999, pp. 63-82. On the *Introductiones Parisienses* (written in the years 1170-1200), the *Logica ‘Ut dicit’* (1200 ca), the *Logica ‘Cum sit nostra’* (1200ca), the *Dialectica Monacensis* (1st quarter of the 13th century) see L. M. de Rijk, *Logica Modernorum*, vol. II; Stump, *Dialectic and its Place*, pp. 111-134.

¹⁴⁵ For an overview, see D. Gundissalinus, *De divisione Philosophiae*, (ed. Bauer, pp. 349-97).

rather than *sermocinalis*, operating with concepts, mainly with concepts of concepts or second intentions, and dealing with terms as well as with arguments. The restricted or 'standard *Organon*', compounded of six tracts, was flanked by the Arabic Long version of the *Organon*, which integrated the *Poetics* and the *Rhetoric* to the *Categories*, *On Interpretation*, *Prior and Posterior Analytics*, *Topics* and *Sophistical Refutations*.¹⁴⁶ The hitherto unknown sources equipped scholars with additional hermeneutic tools, such as the pair 'matter-form',¹⁴⁷ which were advantageous for analysing problematic issues in a deeper, more refined and conceptually rigorous way. The old questions underwent more or less substantial changes and were reshaped in accordance with the new conceptual setting, which favoured the elaboration of innovative solutions to longstanding problems. On the other hand, however, the reading of the Greek and Arabic works introduced new philosophical paradigms and perspectives, which were fertile soil for the proliferation of unsuspected problems.

Moreover, the ancient didactic program based on the seven liberal arts was profoundly modified, since, as Aquinas claimed, the "seven liberal arts do not adequately divide theoretical philosophy".¹⁴⁸ The academic educational programme was reshaped on the Aristotelian *corpus* of writings and on the newly

¹⁴⁶ "According to al-Farabi there are eight parts of logic: "categories, interpretation, prior analytics, posterior analytics, topics, sophistries, rhetoric, poetics" (Gundissalinus, *De divisione*, in Bauer IV, p. 69; Engl. tr. in E. Grant, *A source Book in Medieval Science*, Cambridge (Mass.): Harvard University Press, 1974, vol. 1, p. 67). Al-Fārābī introduced also the idea of the *quadrivium* composed by grammar, rhetoric, dialectic and poetics, which was later adopted also by Albert the Great, for example in his paraphrase of the *Topics* (see *infra* ch. 3.4.4). The long *Organon* was adopted by Albert the Great and also Thomas Aquinas. On this topic see D. L. Black, *Logic and Aristotle's Rhetoric and Poetics in Medieval Arabic Philosophy*, Leiden: Brill, 1990; C. Marmo, "Suspicio: A Key Word to the Significance of Aristotle's Rhetoric in Thirteenth Century Scholasticism", in *Cahiers de l'Institut du Moyen Âge Grec et Latin* 60 (1990), pp. 145-190; J. Brumberg-Chaumont, "Les divisions".

¹⁴⁷ See J. Barnes, "Logical matter and logical form", in A. Alberti, *Logica, mente e persona*, Firenze: Olschki, 1990, pp. 7-119; J. Spruyt, "The *Forma-Materia* device in Thirteenth-Century Logic and Semantics", in *Vivarium* 41 (2003), pp. 1-46; J. Brumberg-Chaumont, "Les divisions".

¹⁴⁸ T. Aquinas, *Exp. Super De Trinitate*, q. 5, a. 1, ed. B. Decker, Leiden: Brill, 1959, p. 167. Cf. H. Roos, "Le Trivium à l'université au XIIIe siècle", in Koch, *Arts libéraux*, pp. 193-197; C. Lafleur, *Quatre introductions à la philosophie au XIIIe siècle: textes critiques et études historique*, Montreal: Institut d'Études médiévales, 1988; C. Lafleur, "Logic in the Barcelona Compendium (With special reference to Aristotle's *Topics* and *Sophistici Elenchi*", in K. Jacobi, *Argumentationstheorie*, pp. 81-98; O. Weijers, "The Evolution of the Trivium in the University Teaching: The Example of the *Topics*", in J. Van Engen, *Learning Institutionalized. Teaching in the Medieval University*, Notre Dame (Ind.): University of Notre Dame Press, 2000, pp. 43-67 (reprinted in O. Weijers, *Études sur la Faculté des Arts dans les universités médiévales. Recueil d'articles*, Turnhout: Brepols, 2011, pp. 351-378).

introduced didactic technique and tool of the *disputatio/quaestio*.¹⁴⁹ Similarly, the organization of knowledge was accommodated to the Aristotelian system; yet logic, along with grammar, still maintained its role of prominence among the disciplines taught. The texts compounding the *logica nova* entered the didactic curriculum of all Universities, and became the object of thorough reading and hermeneutic. Dialectic and logic were not immune from change. *Dialectica* began to be associated with the part of logic expounded in the Aristotelian *Topics* and *Sophistical Refutations*¹⁵⁰ and, accordingly, it was subordinated to *logica*, which covered a wider area.

Having walked hand in hand for centuries, dialectic and logic finally went separate ways which, however, ran side by side and at times intersected. We here will walk the path of dialectic, and the commentaries on Aristotle's *Topics* will guide us along this way: we will leaf through their folios in order to analyse the answers that the authors offered to some of the vexed questions concerning dialectic itself – about its nature, status and realm – as well as about its relations to other disciplines, especially those which were more akin to it, such as rhetoric and metaphysics.¹⁵¹

¹⁴⁹ Bazàn et al., *Les questions*; Lawn, *Rise*; O. Weijers, "L'enseignement du trivium à la Faculté des arts de Paris: la 'quaestio'", in J. Hamesse, *Manuels, programmes de cours et techniques d'enseignement dans les Universités médiévales*, Louvain la Neuve: Publications de l'Institut d'études médiévales, 1994, pp. 57-74; O. Weijers – L. Holtz, *L'Enseignement des Disciplines à la Faculté de Arts (Paris et Oxford, XIII^e–XIV^e siècles)*, Turnhout: Brepols, 1997; O. Weijers, *La disputatio dans les facultés des arts au moyen âge*, Turnhout: Brepols, 2002; *Ead.*, *In Search of the Truth. A History of Disputation Techniques from Antiquity to Early Modern Times*, Turnhout: Brepols, 2013.

¹⁵⁰ "Au XIII^e siècle l'évolution est achevée, le mot *logica* triomphe" (Michaud-Quantin, "Les termes *logica* et *dialectica*", p. 859). It is not a mere coincidence, therefore, that in his *Logica*, or *Summa*, Lambert of Auxerre (or of Lagny, as argued by de Libera) claimed that *logica* is the "art of arts, the science of sciences. When accessible, all [of the sciences] are accessible, when inaccessible, all of the others are inaccessible. Without Logic there is no [science], and any [science] requires it (ars artium, scientia scientiarum qua aperta omnes aperiuntur et qua clausa omnes alie clauduntur, sine qua nulla, cum qua quolibet)" (Lambertus de Auxerre, *Logica (Summa Lamberti)*, ed. by F. Alessio, Firenze: La Nuova Italia Editrice, 1971 (written in 1250-1260), p. 4; Engl. tr. in Lambert of Auxerre, *Logica, or Summa Lamberti*, ed. by T. S. Maloney, Notre Dame: University of Notre Dame Press, 2015, pp. 5-6); on Lambert of Lagny's authorship of the *Summae* see A. de Libera, "Le traité *De Appellatione* de Lambert de Lagny (Lambert d'Auxerre)", in *Archives d'Histoire Doctrinale et Littéraire du Moyen Age* 48 (1981), pp. 227-285.

¹⁵¹ Dialectic dealt with general principles, namely the *loci*, and was 'common', namely it was not restricted to a specific area. Therefore, it could be paralleled to metaphysics, which was the most general discipline, which did not study a specific aspect of being, but the *ens in quantum ens*.

2.2 Reading Aristotle's *Topics*. Some general issues concerning dialectic.

2.2.1 The gradual assimilation of the Aristotelian *Organon* and the Arabic logical writings, such as Algazel's and Avicenna's *Logic*, heavily influenced the 13th century academic discussions about logic, and consequently about dialectic.

Before beginning our inquiry, however, perhaps we would do well to briefly sketch the content of Aristotle's *Topics*. According to modern scholars, the *Topics* is an earlier Aristotelian work conceived by the Stagirite as a practical textbook. Therein, the aspiring young dialectician could find a systematic treatment of the rules to be used in dialectical exchanges such as those described at the end of the *Topics*. Indeed throughout the eight books which comprise the *Topics*, Aristotle provided his reader with a dialectical method, namely with practical advice for succeeding in debates, in which two opponents argued on questions about logic, ethics, natural philosophy and other subjects. The first book had an introductory nature.¹⁵² Firstly, because it announced the scope and the utility of the work, namely "to find a line of inquiry whereby we shall be able to reason from reputable opinions about any subject presented to us, and also shall ourselves, when putting forward an argument, avoid saying anything contrary to it" (chapters 1-3). Secondly, because in chapters 4-18 of that same Book One, Aristotle touched upon some key-notions of both his logic and philosophy in general, such as syllogisms and inductions (ch.12) and the ten categories (ch.9).¹⁵³ Furthermore, he set forth some basic concepts concerning dialectical method, such as the nature of dialectical problems and of dialectical propositions (ch. 4, 10-11), and the four predicables – genus, property, accident or definition (ch. 4-8) of which he stated: "every proposition and every <dialectical> problem indicates either a genus or a property or an accident".¹⁵⁴ In other words, for Aristotle, any dialectical inquiry was concerned with questions regarding the

¹⁵² Even though the first book has a theoretical flavour, the *Topics* should not be seen as developing a systematic theory of dialectic: "Les *Topiques* [...] Leur portée se veut exclusivement pratique; ils fournissent une méthode de dialectique, non une théorie de la dialectique" (Brunschwig, *Les Topiques, livres I-IV*, p. xiii).

¹⁵³ The notion of syllogism in general and its "varieties" or "species", namely demonstration, dialectical syllogism, contentious deductions and fallacies, are addressed in *Topics* I.1; see *infra*, chapter 3.1.

¹⁵⁴ *Top.* I.4, 101b17-18.

correct way of predicating or attributing a term, viz. the predicate, to another term, viz. the subject, as its genus, property, accident or definition.¹⁵⁵ These four predicables, then, “give a highest-level classification of problems or conclusions, and thus a highest-level organization of *topoi*. This is explicitly reflected in the arrangement of Books II-VII”, which contained the *ars topica* and listed almost 300 *topoi*.¹⁵⁶ The second book dealt with the topics concerning accident in general, while book 3 enumerated the topics 1) on what “is the more desirable, or the better, of two or more things” (*Top.* III.1-5) and 2) on accidents appearing in problems put in a universal form (*Top.* III.6). Book four examined “questions relating to genus”, while book five analysed “the question whether the attribute stated is or not a property (*proprium*)”. Specifically, book five inquired “whether the property has or has not been rendered correctly [...] whether the terms in which the property is stated are not or are more familiar” (*Top.* V.2-3) and “whether what is stated is or is not a property at all” (*Top.* V.4-9). Books six and seven featured *topoi* about the definition, more precisely the *topoi* concerning issues such as if the thing “has been defined incorrectly” or correctly (*Top.* VI.2-3) and if its essence has been defined or not (*Top.* VI.4-14). And these *topoi* also addressed “whether two things are the same or different” (*Top.* VII.1-2,) and arguments for establishing the desired definition (*Top.* VII.3-4). The middle section of the *Topics* ended with a comparison of the various kinds of dialectical problems which aimed at identifying the problems which can be constructed and destroyed more easily (*Top.* VII.5).¹⁵⁷ The last book of the *Topics* focused on the practice of dialectical exchange and offered rules and advice for the questioner and the answerer to perform a good dialectical dispute. The dialectical

¹⁵⁵ “In the *Topics*, Aristotle presents a classification, which purports to be comprehensive of all predications. In any predication, he says, the predicate must be in one of four relationships to the subject: *definition, genus, unique property, or accident* [...] The four predicables serve as the largest classifications both of problems and of *topoi*. The first step in dealing with a problem, then, is to identify which predicable it falls under” (Smith, *Topics*, pp. xxix-xxx).

¹⁵⁶ Here, I will not enter the *vexata quaestio* about what a *topos* is and how does it function; on that issue, see the secondary literature mentioned in fn. 100; and Ebbesen, “The Theory of Loci”, pp. 15-39.

¹⁵⁷ Are there some transversal, organizing principles, or “categories of classification of conclusions” which underlie books 2-7 and according to which the *topoi* concerning the four predicables could be grouped? Smith has proposed “three large classifications” running under the four predicable divisions: “*topoi* involving ‘opposites’ (*antikeimena*), *topoi* involving ‘coordinates’ and ‘cases’ (*sustoicha, ptōseis*), and *topoi* involving ‘more and less and equal’”. Aristotle generally presents these three groups together and in the same fixed order” (Smith, *Topics*, p. xxxi).

practice involved a questioner and an answerer who argued about the proposed question through deductions called dialectical syllogisms. The starting point of the dialectical syllogisms were the *endoxa* (ἐνδοξα), namely opinions “universally or widely accepted and shared” which at first sight were more believable than the conclusion:

It is a dialectical deduction, if it reasons from reputable opinions (ἐνδοξα) [...] Those opinions are reputable which are accepted by everyone or by the majority or by the wise- i.e. by all, or by the majority, or by the most notable and reputable of them (ἐνδόξοις).¹⁵⁸

The aforesaid definition of the endoxic premises, given at the beginning of the *Topics*, was supplemented a few pages later by other details, according to which *endoxa* were also those “things which are similar to what is acceptable; the contraries of things which appear to be acceptable, put forward by negation; and such opinions as are derived from established arts.”¹⁵⁹ As strange as it might sound for a modern mind used to understanding probability in quantitative and stochastic terms, from the Aristotelian perspective probability or endoxality was a qualitative notion.¹⁶⁰ As

¹⁵⁸ Aristotle, *Topics*, I.1, 100a30-b24, in Barnes, *Complete Works*, vol. 1, pp. 167-8; “Propositum quidem negotii est methodum invenire a qua poterimus syllogizare de omni problemate ex *probabilibus* [...] Primum igitur dicendum quid est syllogismus et quae eius differentiae, quatinus sumatur dialecticus syllogismus; hunc enim quaerimus secundum propositum negotium [...] Probabilia autem <sunt> quae videntur omnibus aut pluribus aut sapientibus, et his vel omnibus vel pluribus vel maxime notis et probabilibus [et praecipuis]” (Aristoteles, *Topica*, I.1, 100a19-24, in L. Minio-Paluello-B. G. Dod, *Aristoteles Latinus: Topica. Translatio Boethii, Fragmentum Recensionis Alterius et Translatio Anonyma* (Aristoteles Latinus V, 1-3), Brussels – Paris: Desclée De Brouwer, 1969 (hereafter *AL*), pp. 5,1-6,1). As proposed by some scholars, such as Bolton and Brunschwig, Aristotle’s definition of *endoxa* can be interpreted as a decreasing authoritative hierarchy that reflects the level of acceptance of *endoxa* and their consequent greatest or lesser weight and authority.

¹⁵⁹ Aristotle, *Topics*, I.10, 104a13-15, in Barnes, *Complete Works*, vol. 1, p. 173.

¹⁶⁰ A vast secondary literature about Aristotle’s notion of ἐνδοξα has been generated since the second half of the last century, especially after the publication of Owen’s seminal article “Tithenai Ta Phainomena”; Aristote, *Les Topiques, livres I-IV*, Paris: Les Belles Lettres, 1967, esp. pp. 113-114; R. Bolton, “Definition and Scientific Method in Aristotle’s *Posterior Analytics*”, in A. Gotthelf- J. Lennox, *Philosophical Issues in Aristotle’s Biology*, Cambridge: Cambridge University Press, 1987, pp. 120-166; R. Bolton, “The epistemological basis of Aristotelian dialectic”, in D. Devereux-P. Pellegrin, *Biologie, logique et métaphysique chez Aristote: actes du séminaire C.N.R.S.-N.S.F., Oléron 28 juin-3 juillet 1987*, Paris: Editions du CNRS, 1990, pp. 186-236; J. Cooper, “Aristotle on the Authority of ‘Appearances’”, in *Id.*, *Reason and Emotion: Essays on Ancient Moral Psychology and Ethical Theory*, Princeton: Princeton University Press, 1999, pp. 281-291; Brunschwig, “Dialectique”; J. Barnes, “Philosophy and Dialectic”, in J. Barnes-M. Bonelli, *Method and Metaphysics: Essays in Ancient Philosophy*, vol. 1, Oxford: Oxford University Press, 2011, pp. 164-173; D. Frede, “The Endoxon Mystique: What Endoxa are and What They

emerged from the information scattered in these and further passages of the *Topics*, in this writing the Stagirite employed the term ἔνδοξον¹⁶¹ in relation to people and, mainly, propositions. The endoxality of propositions did not stem from any intrinsic property or from the nature of actual things that the proposition talked about. Nor did endoxality depend on the truth-value of the sentence, for Aristotle claimed that endoxic premises had an undefined truth-value and could indifferently be true or false, although they could not be openly false. Probability was extrinsically bestowed on propositions on the basis of their being believed or approved by any group, either by the totality or the majority of people or by a minority of experts. It depended on the superior number of the multitude, either all or the majority, or on the acknowledged standing of some persons deemed experts, again, either the totality or majority or an élite. Relying on someone judging, and on his beliefs about the fact, the Aristotelian notion of probability could not have any mathematical overtone.

Since their ‘rediscovery’ in the Latin West, the *Topics*, read in the Boethian translation, along with the sections devoted to the topics that were included in the

are Not”, in *Oxford Studies in Ancient Philosophy* 43 (2012), pp. 185-215; J. Karbowski, “Complexity and Progression in Aristotle’s Treatment of Endoxa in the *Topics*”, in *Ancient Philosophy* 35 (2015), pp. 75-96. On the pre- and modern notions of Probability see: A. Gardeil, “La ‘certitude probable’”, in *Revue des sciences philosophiques et théologiques* 5 (1911), pp. 237-485; T. Deman, “Probabilis”, in *Revue des sciences philosophiques et théologiques* 22 (1933), pp. 260-90; E. Byrne, *Probability and Opinion. A Study in the Medieval Presuppositions of Post-Medieval Theories of Probability*, The Hague: Nijhoff, 1968; K. Michalski, *La philosophie au XIV^e siècle*, Frankfurt: Minerva, 1969; I. Hacking, *The Emergence of Probability: A Philosophical Study of Early Ideas about Probability, Induction, and Statistical Inference*, Cambridge: Cambridge University Press, 1975; P. Von Moos, “‘Was allen oder den meisten oder den Sachkundigen richtig scheint.’ Über das Fortleben des endoxon im Mittelalter”, in B. Mojsich–O. Pluta, *Historia Philosophiae Medii Aevi* II, Amsterdam: Grüner, 1991, pp. 711-743; I. Kantola, *Probability and Moral Uncertainty in Late Medieval and Early Modern Times*, Helsinki: Luther-Agricola Society, 1994; D. Gillies, *Philosophical Theories of Probability*, London: Ashgate, 2000; S. Knebel, *Wille, Würfel und Wahrscheinlichkeit*, Hamburg: Meiner, 2000; J. Franklin, *The Science of Conjecture*, Baltimore, MD: Johns Hopkins University Press, 2001; A. Hald, *A History of Probability and Statistics and Their Applications before 1750*, New York: Wiley, 2003; S. Knebel, “Wahrscheinlichkeit, III. Scholastik”, in J. Ritter et al., *Historisches Wörterbuch der Philosophie* XII, Basel: Schwabe, 2004, pp. 252-65; P. Von Moos, “Die ‘bloße’ und die wahrheitsfähige Meinung im Mittelalter”, in K. Hempfer–A. Traninger, *Macht Wissen Wahrheit*, Freiburg: Rombach, 2006, pp. 55-75; R. Schuessler, “Probability in Medieval and Renaissance Philosophy”, in *The Stanford Encyclopedia of Philosophy* (Winter 2016 Edition), Edward N. Zalta (ed.), URL = <<https://plato.stanford.edu/archives/win2016/entries/probability-medieval-renaissance/>>.

¹⁶¹ In his Latin translation of the *Topics*, Boethius translated ἔνδοξα as *probabilis* and *probabilia*. On Boethius’ translation see *infra*, ch. 5.2.

general textbook usually baptized *Summae* or *Summulae*, such as that of Peter of Spain, constituted the main and proper realm of dialectic. Dialectic was indeed even more identified with the logic of probable - expounded mainly in the Aristotelian *Topics*. The autonomization of dialectic allowed for the establishment of certain relationships between this discipline and general logic on the one hand, and between dialectic and the other subpart of logic - each of which matched with a book of the *logica nova*, that is *Posterior Analytics* and *Sophistical Refutations* - on the other hand. Thus, the ancient problem concerning the place of dialectic within the system of sciences seemed to have eventually found a solution, even though it carried with it some lateral issues which related to the nature of logic, as we shall see.

2.2.2 The proper places for debates about dialectic were the schoolrooms of the Faculty of Arts and, then, also the *Studia* of religious orders. Indeed during the Medieval epoch reflections on dialectic were the outcome both of the master's daily reading and commenting upon 'dialectical' writings - mainly on Aristotle's *Topics*, and also as a result of classroom and public disputations. Scholastic commentaries upon these texts - the great majority of which remain unedited, provide us with a testimony of this teaching activity.¹⁶² Typically, these works opened with an epistemological and methodological introduction to dialectic, whose length largely varied, and which was meant to provide students with a preliminary overview on the nature of the discipline taught. For the sake of completeness, in this context masters also expanded upon the relation between dialectic and the *Topics* with general logic and the other writings of the *Organon*. Usually, at the beginning of their clarification of the epistemological status of dialectic, the masters approached the issue of whether dialectic was an art or a science. This question, which every logician was faced with since Boethius' time, had become more problematic after the spread of Peripatetic philosophy - which had proposed a new understanding of the notions of art and science as cognitive dispositions. The Aristotelian connotation of *ars* and *scientia* gradually gained predominance over the oldest meanings, although they never replaced the pre-Aristotelian notions fully:

¹⁶² For the presence of the *Topics* in the *curricula* of European Universities during the Middle Ages and for the manuscript tradition of commentaries on this work, see *infra* ch. 5.1.1.

the names 'art' and 'science' are sometimes taken broadly, and sometimes strictly or properly. If they are taken broadly, then we use them interchangeably, as synonyms; hence, taken in this way, in this description it would be sufficient to insert only one of these two names. Indeed, logic should not even be called the science of sciences, for this would indicate a certain excellence of logic with respect to [all] other sciences, which it cannot have with respect to metaphysics; in fact, metaphysics, rather than logic, should more truly be called the science of sciences, having access to the principles of all inquiries. But when the names 'art' and 'science' are taken strictly, then, in [accordance with] bk. VI of the *Ethics* [scil. EN, VI.3, 1139a15-17] there are five intellectual habits, or virtues, distinguished from one another, namely, understanding, wisdom, prudence, science [or knowledge: *scientia*], and art. Therefore, taken in this way no such habit is at the same time art and science; in fact, logic thus understood is an art, rather than a science.¹⁶³

The term *ars* had enjoyed many meanings during the Medieval period. Limitedly to logic and philosophy, it was employed to denote the totality of "strict art and rules"; or "a set of rules which provide a definite method and a system of doing anything". A rather neutral definition of art described it as "the set of manifold principles or rules which are directed towards a unique scope"; moreover, art was also understood in opposition to nature as the method or "system that reason has devised in order to expedite, by its own short cut, our ability to do things within our natural capabilities". Art, then, was defined oxymoronically as the "*scientia finita infinitorum*", namely the "science capable of handling the infinite possibilities of

¹⁶³ J. Buridan, *Summulae de Dialectica*, 1.1.1 (Eng. tr. in J. Buridanus, *Summulae de dialectica*, trans. by G. Klima, New Haven: Yale University Press, 2001 (hereafter abbreviated as *SD*; when not specified, I will make use of this translation), p. 6). In the following century, the Realist John Versoris claimed that "*ars dupliciter accipitur, uno modo specialiter, ut ab Aristoteles definitur quod est recta ratio rerum a nobis factibilium* [scil. *Auct. Aris.* p. 240.56] [...] *Alio modo sumitur ars generaliter ut definitur a Tullio, quae est collection plurium praeceptorum in unum finem tendentium* [M. Victorinus, *Ars grammatica*, 1.2, ed. by I. Mariotti, Firenze: Le Monnier, 1967, p. 65,5-7]. Et hoc modo est quoddam superius ad scientiam et ad artem proprie dictam" (J. Versoris, *Petri Hispani Summulae logicales cum Versorii Parisiensis clarissima expositione* (quoted by N. Germann, "Logik zwischen 'Kunst' und 'Wissenschaft'. Avicenna zum Status der Logik in seiner Isagoge", in *Recherches de Théologie et Philosophie Médiévales* 75/1 (2008), pp. 1-32, here p. 30).

nature".¹⁶⁴ In some commentaries on Aristotle's *Organon*, and thus also on the *Topics*, the term 'art' designated the discipline taught in the book under discussion – viz. the *ars prioristica, demonstrativa, topica, sophistica* – as well as the books themselves.

The Aristotelian *technê* (τέχνη, *ars* in Latin), had instead a narrower semantic extension. In its stricter sense, which the Stagirite had stated and articulated in the sixth book of the *Nicomachean Ethics*, *technê* denoted one of the five cognitive dispositions of the intellectual part of the soul, along with knowledge/science, practical wisdom, philosophical wisdom and comprehension. Art was the productive intellectual virtue accompanied by true reasoning, which was "concerned with coming into being, i.e. with contriving and considering how something may come into being which is capable of either being or not being".¹⁶⁵

Similarly to art, the Medieval pre-Aristotelian notion of science had not received a strict, well defined connotation. Some 13th century authors, such as William of Auxerre and Roger Bacon, as well as many Parisian master of Arts of the 1250s, defined sciences as "nobilis animi possessio, quae distribute recipit incrementum et avarum dedignata possessorem, quae, nisi publicetur, cito elabitur".¹⁶⁶ Whilst in the

¹⁶⁴ This classification is provided by De Rijk (*Logica Modernorum*, vol. II, part 1, pp. 171-176), who identified the respective sources: 1) Isidore, *Etymologiae* I.1.2: "ars dicta, quod artis praeceptis regulisque constat"; then Papias in his lexicon, *sub voce* "Ars", and Hugh of St. Victor (*Didascalicon* II.1); 2) Ps. Cicero, *Auctor ad Herennium*, I.1.3: "ars est preceptio quae dat certam viam rationemque faciendi aliquid", this definition appears variously reshaped in some twelfth century treatises on logic, e.g. in the *De arte disserendi*: "ars est preceptio qua aliquid docemur facere"; 3) the definition of *ars* as "collectio multorum principiorum sive preceptorum (=regula, maxima, locus) ad unum finem tendentium", which is found in Victorinus (Victorinus, *Ars grammatica*, 1.2, p. 65,5-7) but was (erroneously) ascribed to Cicero, is found in many 12th century logic textbook, such as the *Logica 'Cum sit nostra'*, *Logica 'Ut dicit'*, in Roger Bacon's *Summulae* and Lambert of Auxerre's *Logica*; 4) Abelard defined *ars* as "id est scriptum, quod subjectis praeceptis scientiam coartat, ipsam amplificat quam natura suscitatur", also the *Introductiones parvulorum* (*Glossae super Topica*, in Pietro Abelardo, p. 206.7-13) and similarly did John of Salisbury (*Metalogicon* I.11): "est autem ars ratio que compendio sui naturaliter possibilium expedit facultatem. Neque enim impossibilem ratio prestat aut pollicetur effectum, sed eorum que fieri possunt quasi quodam dispendioso nature circuitu compendiosum iter prebet, et parti (ut ita dixerim) difficilem facultatem. Unde et Greci eam 'methodon' dicunt quasi compendiarium rationemque nature vitet dispendium et amfractuosum eius circuitum dirigat, ut quod fieri expedit, rectius et facilius fiat"; 5) John's definition was rewritten by authors related to the school of Petit Pont: "(ratio) tandem artem statuit quasi quandam infinitorum finitam esse scientiam", a definition which "is only found in what we may call an 'English' tradition", according to De Rijk.

¹⁶⁵ Aristotle, *Nicomachean Ethics*, VI.4, 1140a9-14, in Barnes, *Complete Works*, vol. 2, p. 1800.

¹⁶⁶ A. de Libera, "Les Summulae dialectices de Roger Bacon I-II. De Termino. De Enuntiatione", in *Archives d'histoire doctrinale et littéraire du moyen âge* 53 (1986), pp. 139-289, esp. pp. 151-154; R. A. Gauthier traced back the roots of this definition of science to Alain of Lilla's *Anticlaudianus* and *De Planctu Naturae*.

sixth book of the *Nicomachean Ethics*, Aristotle had assigned a technical sense to *epistêmê* (ἐπιστήμη, in Latin *scientia*). The term ‘science’ denoted the habit of the intellectual part of the soul underlying knowledge of eternal, immutable, necessary things. Scientific knowledge involved demonstration, namely the deduction of the conclusion starting from a set of first principles, on which Aristotle had fully and detailingly expounded in the *Posterior Analytics*.¹⁶⁷ While the pre-Aristotelian notions of art and science were perfectly compatible, from the Peripatetic viewpoint they were hardly harmonizable.

Some passages of the *Topics* seemed to incline toward an assimilation of dialectic to art rather than to science. When explaining that a good dialectician is not the one who always achieves the goal, but he who considers and uses all the proper means at his disposal for reaching the aimed end, Aristotle compared dialectic to arts such as rhetoric and medicine.¹⁶⁸ Additionally, in his methodological remark about the kind of accuracy apt to his treatment of the matter explained in the *Topics*, the Stagirite had admitted that the subject did not require “a precise definition (*subtiles rationes*)”: a mere description in outline, *figuraliter*, was more suitable to it.¹⁶⁹ It is rather unlikely that these words did not bring to the minds of medieval commentators the homologous methodological claims that opened the *Nicomachean Ethics*. In the first book of this treatise, Aristotle had affirmed that the discussion he was going to undertake would have been adequate if it had had the clearness apt to the subject matter, “for precision (το ἀκριβές) is not to be sought for alike in all discussions”. As a corollary, he affirmed that he would have been content “in speaking of such subjects and with such premises to indicate the truth roughly and in outline, and in speaking about things which are only for the most part true and with premises of the same kind to reach conclusions that are no better”.¹⁷⁰ Therefore,

¹⁶⁷ Aristotle, *Nicomachean Ethics*, VI.3; *Id.*, *Posterior Analytics*, I.1-2. A questionable point concerning the Aristotelian notion of science was whether *scientia* had a subjective or/and an objective value. Or, in other terms, if *scientia* was a disposition of the soul or/and a body of scientific knowledge.

¹⁶⁸ *Topics* I.3.

¹⁶⁹ *Topics* I.2, 101a20-24.

¹⁷⁰ *Nicomachean Ethics*, I.1, 1094b1-27; “Certum enim non similiter in omnibus sermonibus querendum est, quemadmodum neque in conditis [...] Amabile igitur de talibus et ex talibus dicentes, grosse et *figuraliter* veritatem ostendere; et de his que ut frequencius et ex talibus dicentes, talia et concludere. Eodem utique modo et recipere debitum est unumquodque dictorum. Disciplinati enim est in tantum certitudinem inquirere secundum unumquodque genus, in quantum rei natura recipit. Proximum enim videtur et mathematicum peresudentem acceptare, et rethoricum demonstrationes

in inquiries about practical matters, such as carpentry, the ‘practical accuracy’ was more suited than the highest level of precision, which was instead required in disciplines such as geometry. Probably, the ‘dialectical’ accuracy described in the *Topics* seemed closer to the ‘practical accuracy’ of the carpenter than to the ‘mathematical accuracy’ of the geometer.¹⁷¹

Now further related questions arose, since the discussions about the nature of dialectic began taking place within the Aristotelian theory of science. Firstly, if dialectic was deemed to be a science, it was then necessary to specify whether it was a speculative or a practical science. The *Topics* could not provide any decisive insight for answering this. Aristotle had indeed stated that dialectical problems could concern “choice and avoidance” – “e.g. whether pleasure is to be chosen or not” – as well as “truth and knowledge, e.g. whether the universe is eternal or not”.¹⁷² Furthermore, commentators had to harmonize the epistemic status of logic, which required it to “mark off some particular being, some genus” and to “demonstrate the essential attributes of the genus with which they deal”,¹⁷³ with Aristotle’s claims about the universal applicability of the dialectical method. If, indeed, dialectic was suited for reasoning “about any subject presented” and could pave “the path to the principles of all inquiries”,¹⁷⁴ how could it be a ‘scientia specialis’? Moreover, if dialectic was a science, how could it produce mere opinion, and not scientific knowledge, about the doubtful debated question?

The earliest existent commentaries on the *Topics*, which date from the 40s of the 13th century, already exhibit the basic features of the solutions to the epistemological issue about the nature of dialectic, which were shared by future generations of commentators, even though variously nuanced.

Similarly to Boethius, medieval authors endeavoured to put together the two horns of the dilemma about the epistemological status of dialectic, rather than to

expetere” (Tr. lincolniensis: recensio pura, AL 26, 1-3, ch. 2, pp. 142-143). Cf. also *Nicomachean Ethics*, I.7, 1098a25-30. Cf. Maierù, “Influenze Arabe”, pp. 263-67.

¹⁷¹ Cf. Robert Kilwardby, *De ortu*, ch. 41, p. 135-6, § 383-388.

¹⁷² Aristotle, *Topics*, I. 3 and 11.

¹⁷³ Aristotle, *Metaphysics*, VI.1, 1025b8-18, in Barnes, *Complete Works*, vol. 2, p. 1619).

¹⁷⁴ Aristotle, *Topics*, I.1, 100a1 and I.2, 101b3-4, in Barnes, *Complete Works*, vol. 1, p. 168.

straightforwardly take up one of them. They solved the apparent inconsistency about the middle position of dialectic by applying the general hermeneutic category “docens/utens”, which connotated two distinct but related facets of this discipline, respectively the pure theoretical and the practical or applied aspects.¹⁷⁵ The usage of this conceptual pair - which was still present in the 19th century in authors such as Charles S. Peirce - was cross-disciplinary since it was suited not only to dialectic, but to the sciences which did not have a purely speculative purpose, such as general logic, sophistry, rhetoric, poetics and ethics.¹⁷⁶

As *docens*, dialectic was a science. Medievals indeed understood the *dialectica docens* (theoretical or teaching dialectic) as the metalogical reflections on the subject-matter of dialectic, and of its properties and principles, which were achieved through demonstration. Considered from this perspective, therefore, dialectic met all the requirement of scientificity. In contradistinction, as *utens*, dialectic was an art. The

¹⁷⁵ See S. Ebbesen, “Logica docens/utens”; *Id.*, *Commentators and Commentaries on Aristotle’s Sophistici Elenchi: A study of post-Aristotelian Ancient and Medieval writings on Fallacies*, Vol. 1, pp. 88-90; *Id.*, “Is Logic Theoretical or Practical Knowledge?”, in J. Biard, *Itinéraires d’Albert de Saxe: Paris – Vienne au XIV^e Siècle. Actes du Colloque organisé le 18–22 juin 1990 dans le cadre des activités de l’URA 1085 du CRNS à l’occasion du 600^e anniversaire de la mort d’Albert de Saxe*, Paris: Librairie Philosophique J. Vrin, 1991, pp. 267–276; N. Germann, “Logik”. With regard to dialectic in particular, see N. J. Green-Pedersen, “On the Interpretation of Aristotle’s *Topics* in the 13th century”, in *Chaires de l’Institut du Moyen Âge grec et latin*, 9 (1973), pp. 1-45, here pp. 14-15. Even though the exact source of this distinction has not been identified, some hypotheses have been proposed. Ebbesen has identified a possible source of inspiration in the similar distinction that is found in the tradition of Greek Commentaries on the *Sophistical Refutations* and which would possibly be transmitted to the Western Latin world through the mediation of James of Venice (Ebbesen, *Commentators*, p. 89). Germann (“Logik”) has proposed an Arabic origin for this pair of participles. Latin authors, indeed, might have been inspired by the beginning of the Avicennian *Al-Madkhal*. Here, they could read not only Avicenna’s view on logic, according to which this discipline deals with second intentions and aims at knowing what is unknown from the known. But also his opinion concerning the status of logic and its place in the system of sciences. According to the Arabic thinker, the question of whether logic was a branch of philosophy, and therefore a science, or rather an instrument of philosophy and thus an art, was a false dilemma, since logic was both a science and an art. Albert the Great quoted *verbatim* Avicenna in the second chapter of his Commentary on Porphyrys’ *De V universalibus*, which was devoted to the issue *an logica sit aliqua pars philosophiae*. Moreover, Abelard discriminated between the practical and speculative/theoretical aspects of logic/dialectic (see *supra* ch. 2.1)

¹⁷⁶ Some commentators of the *Topics*, like Robert A.7 (see *infra*, ch. 3.1), applied this distinction even to speculative disciplines: according to Robert, indeed, the *demonstrativa sive philosophia prima* is *docens* and *utens*. The distinction between ‘speculative grammar’, which “speculates about the principles, rules and conclusions of the grammatical science”, and “positive grammar, which teaches the significates of the terms [...] is not a science” brings to mind the distinction between *docens* and *utens* (the quotation is mentioned in I. Rosier-Catach, “Grammar”, in R. Pasnau, *The Cambridge History of Medieval Philosophy*, Cambridge: Cambridge University Press, 2010, vol. 1, ch. 15, pp. 187-216, here p. 206).

*dialectica utens*¹⁷⁷ indeed put into practice the theory of dialectical reasoning elaborated upon by the teaching logic (*docens*) to logical, dialectical, theological, physical and ethical problems. Accordingly, two levels or species of *dialectica utens* could be identified, namely the dialectical or logical level and the extradialectical or extralogical level. On the dialectical/logical level, the dialectician applied dialectical syllogisms and topics to dialectical problems, namely to issues pertaining to the correct way of attributing or denying the attribution of one of the four predicables – namely accident, proper, genus and definition – to a subject. Whereas, at the extralogical level, the *dialecticus utens* used the dialectical theory of reasoning in theological, physical, ethical debates through an object language. Applied logic was thus strictly dependent on theoretical logic since it was the *docens* that established and studied the kind of dialectical reasoning, viz. syllogism or other species of argumentation, and their properties as well as the rules for arguing correctly, which then served as the instrument for practical logic.

Through the distinction between the theoretical and practical levels of dialectic the gap between the Aristotelian and the Stoic views about logic/dialectic was eventually bridged, since dialectic was both a part of and an instrument of philosophy. Teaching dialectic (*dialectica docens*) was a special science which produced certain knowledge about its limited, defined subject matter. Whereas the *dialectica utens* was the universal method suited for arguing in a probable way on necessary as well as contingent matters about which it could only produce opinions, namely beliefs less certain than knowledge.

¹⁷⁷ The *logica utens* does not amount to the *logica usualis*. On the basis of some Aristotelian claims, such as that found in *Sophistical Refutations*, 11, 172a17-35 (cf. supra fn. 93), some scholastic authors (like Robertus de Cilnacobi (A.1), f. 97ra; Walter Burley, *Notulae*, bk 1, C121rb, V114va-vb) admitted an inborn capacity to produce syllogistic reasoning, labelled *logica usualis*, which they opposed to artificial logic. The *logica artificialis* was the science dealing with the study of the rules for reasoning correctly: “syllogizans nesciens se syllogizare habet logicam usualiter sed non habet eam artificialiter, quia nescit se syllogizare nec habere logicam; isto modo syllogizant idiote secundum Philosophum” (W. Burley, *Expositio super librum Porphyrii*, transcribed by M. Vittorini, available on line http://www-static.cc.univaq.it/diri/lettere/docenti/conti/Allegati/WB_praedicabilia.pdf). Some later authors, mainly nominalistically oriented, added a further kind of logic, the *logica naturalis*, which related to the natural capability to readily argue. The distinction ‘docens/utens’ concerns artificial logic. Cf. Hoenen, “From Natural Thinking”; L. Cesalli, “Logique et Topique chez Gauthier Burley”, L. Cesalli, “Logique et Topique chez Gauthier Burley”, in Biard-Mariani-Zini, pp. 293-333, pp. 298-299, esp. p. 298, fn. 3.

2.2.3 Another principal issue for Medieval commentators was the partition of logic into an inventive and a judicative part, which had its origin in the topical writing of Cicero and Boethius, and which was accepted by the great majority of Medieval logicians. After the recovery of Aristotle's *Organon* and especially of the *Topics*, this problem needed to be reshaped.¹⁷⁸ Moreover, from this main issue some by-product questions stemmed, one of which concerned the place of the *Topics* in the internal ordering of the books of the *Organon*. The authors' answers to these problems were strictly related not only to their views about *inventio* and *iudicium*, but also to the various criteria which each of them adopted for discriminating amongst the diverse logical disciplines and for arranging the Aristotelian logical writings. It is perhaps more advantageous to consider each of these issues in detail. It will help us recognise the views advocated by commentators, and to consider whether their ideas were compatible with some of the intellectual trends which prevailed in logic during the time in which they were reading and commenting upon the *Topics*.

Medieval authors did not come across the bipartition of logic between *iudicium* and *inventio* in their classroom readings of Aristotle's logical writings, for this distinction was conveyed by Boethius' works on the topics. In his *De Topicis Differentiis* as well as in his commentary on Cicero's *Topica* - which was the source for his distinction, Boethius had claimed both that the Aristotelian logic constituted the discovery of arguments, which was called "Topics", as well as the judgement of arguments, which was named "Analytics", and was expounded upon in the two homonymous Aristotelian treatises and in the *Sophistical Refutations*.¹⁷⁹ Boethius had connected Topics and Analytics through the pair 'matter-form', by assigning the role of 'matter' to discovery and the role of 'form' to judgement. Discovery had indeed to supply "the matter for judgment", and judgement had in turn to evaluate whether arguments, considered as hylemorphic composites, were compounded of the apt matter, namely the propositions or premises, and of the correct form, that is "the composition of the propositions among themselves".¹⁸⁰

¹⁷⁸ Green-Pedersen, "On the interpretation", pp. 7-8.

¹⁷⁹ See *supra*, ch. 2.1.

¹⁸⁰ Boethius, *In Topica*, 2.07, 1047A; Stump, *In Topica*, p. 27; see *supra*, ch. 2.1.

How did the *inventio* or *topica* accomplish its heuristic task and discover arguments? When a question was posited, namely when “a proposition [was] brought into doubt and uncertainty, as when someone ask[ed] whether the heaven is revolvable”, an argument was needed to confirm the conclusion, e.g. “when someone shows by means of other facts that the heaven is revolvable”. Thus, the argument, which could be either necessary or probable, was strictly connected to the question from which it started. Boethius defined the argument in epistemological terms as “a reason producing belief regarding a matter [that is] in doubt (*argumentum est ratio rei dubiae faciens fidem*)”,¹⁸¹ and also in logical terms as “the discovery of an intermediate”¹⁸² or the middle term of a syllogism. A syllogism was “a discourse (*oratio*) in which, when certain things have been laid down and *agreed to*, something other than the things *agreed to* must result by means of the things *agreed to*”.¹⁸³ Syllogism was the principal species of argumentation, and the argumentation was the unfolding of the argument “by means of discourse (*oratio*)”. Boethius claimed also that there were appropriate *loci* for the various syllogisms:

Arguments drawn from definition, genus, differentia, or causes most of all provide force and order to demonstrative syllogisms; the remaining arguments,

¹⁸¹ Sketching the different kinds of arguments in the first book of his *De Topicis Differentiis*, Boethius had attributed a basic role to the subject’s assent in epistemic processes, e.g. when he describes the argument as the reason that produces <firm> belief in the hearer about a doubtful issue, thus implying a psychological activity of the subject involved. This aspect has been highlighted also by E. Stump: “Boethius defines argument not as something of particular form [...] but as a reason having certain effect on its perceiver. Because he defines argument in psychological rather than logical or formal terms [...] the same things are argument and not arguments, depending on who is perceiving them” (Stump, *Boethius*’, p. 109, fn. 82).

¹⁸² “Quoniam igitur extremi termini medii interpositione copulantur, eoque modo quaestionis inter se membra conveniunt, adhibitaque probatione solvitur dubitatio, nihil est aliud argumentum quam medietatis inventio, haec enim vel coniungere, si affirmatio defendatur, vel disiungere, si negatio vindicetur, poterit extremos” (Boethius, *In Topica*, bk. 1, 1051A, p. 279,30-31; Stump, *In Topica*, p. 32).

¹⁸³ “Syllogismus est oratio, in qua positis quibusdam *et concessis* aliud quiddam per ea ipsa quae concessa sunt evenire necesse est quam sunt ipsa quae concessa sunt” (Boethius, *De Topicis*, bk. 2, 1183A; Stump, *Boethius*’, p. 43; the italics are mine). Syllogism, Boethius stated, has priority over the other species of argumentation- induction, enthymeme and example, since these “obtain their force from the syllogism” (Boethius, *De Topicis*, bk. 2, 1185A, Stump, *Boethius*’, p. 46). Stump has pointed out that, despite the similarity in their formulation (cf. Aristotle, *Prior Analytics*, I.1, 24 b18-22 and *Topics*, I.1, 100a25-27), Boethius did not employ the notion of syllogism in the technical, narrow sense of the Aristotelian valid syllogism analysed in the *Prior Analytics*: “That he is using ‘syllogism’ in a broader sense than ‘(valid) Aristotelian syllogism’ is clear from some of the examples which he considers syllogism and which do not fall under any of the moods of the syllogism” (Stump, *Boethius*’, pp. 110-111, fn. 5).

to syllogisms which have the appearance of truth and are dialectical. The Topics which have most of all to do with the substance of the things asked about in the question have to do with predicative and simple syllogisms; the remaining Topics, with hypothetical and conditional syllogisms.¹⁸⁴

Insofar as it had to “provide force and order” to an argument or a syllogism, the *locus*/topic was the grounding or ‘foundation’ (*sedes*) of the argument itself. It could “be understood partly as a maximal proposition, partly as the Differentia of a maximal proposition”.¹⁸⁵ Unfortunately, Boethius’ treatment of the *topica* did not include a theoretical explanation of the topical heuristics. It only offered practical examples of how *loci* and syllogisms related to each other in the elaboration of arguments. According to Eleonore Stump, the topics, especially the topics *differentiae*, were the means through which the intermediates were found. The *locus differentiae* indeed should provide “the genus of intermediate appropriate to th[e] argument”. Moreover, it was suitable for finding the appropriate maximal proposition by which the dialectical argument was secured. Since the topics were apt for producing not only probable or dialectical arguments, but also necessary arguments fitting for philosophical demonstration, the *topica* was advantageous not only and mainly for orators and dialecticians, but secondarily for philosophers too: “insofar as knowledge of the Topics serves dialecticians and orators, it provides an abundance [of materials] for speech by means of the discovery [of arguments]; on the other hand, insofar as it teaches philosophers about the topics of necessary [arguments], it points out in a certain way the path of truth”.¹⁸⁶

It is worth bearing in mind that the Boethian *topica* depended mainly on the Ciceronian and Themistian tradition of the topics, and that the Aristotelian *Topics* did not directly influence any of Boethius’ monographic writings devoted to the topics. This explains why some important notions that played a prominent role in

¹⁸⁴ Boethius, *De Topicis*, bk. 2, 1195A-B, Stump, *Boethius*’, pp. 61-62.

¹⁸⁵ “Argumenti enim sedes partim maxima propositio intelligi potest, partim propositionis maximae differentia” (Boethius, *De Topicis*, bk. 2, 1185A, Stump, *Boethius*’, p. 46). On Boethius’ locus see Boethius, *De Topicis*, esp. bk 2; E. Stump, “Dialectic and Boethius’ *De topicis differentiis*”, in Stump, *Boethius*’, pp. 179-204; Green Pedersen, *The tradition*, pp. 39-82; Ebbesen, “The Theory of Loci”; F. Magnano, “Il *De topicis differentiis* di Severino Boezio”, Palermo: Officina di Studi Medievali, 2014.

¹⁸⁶ Boethius, *De Topicis*, bk. 1, 1182C, Stump, *Boethius*’, p. 42.

Aristotle's *Topics* and dialectic, such as the four predicables, could hardly find a practical function in Boethius' *topica*.

In the Arabic tradition, which (mostly) remained unknown to Medieval commentators, the universal heuristic function of the topical art (Topic) was even more emphasized and played a fundamental role in logic in general. Within this tradition, indeed, the topics were reckoned to be the proper tool for finding premises and producing any kind of syllogism - dialectical as well as apodictic syllogisms. Consequently, the Topic was not limited to nor coincided with dialectic. Having accentuated the role of the doubtful proposition (*quaesitum*) in the logical inquiry, Al-Fārābī and Averroes considered the Topics "a heuristic method which [...] allows one to construct syllogisms intended to establish a given *quaesitum*".¹⁸⁷ More specifically, according to these authors the *topos* provided the material element of deductions, namely the suitable premises to produce the syllogism for the given particular *quaesitum*. And, according to Averroes, they were advantageous even from the 'formal' view point since the *topoi* served for establishing the proper figure of the syllogism related to the *quaesitum*.¹⁸⁸ The universal role attributed to the Topic

¹⁸⁷ A. Hasnawi, "Topic and Analysis: The Arabic Tradition", in R. W. Sharples, *Whose Aristotle? Whose Aristotelianism?*, Aldershot: Ashgate, 2001, pp. 28-62, here p. 32; see also *Id.*, "Topique et syllogistique: la tradition arabe (al-Farabi et Averroès)", in Biard-Mariani-Zini, *Les lieux*, pp. 191-226. This paragraph relies on Hasnawi's account. Hasnawi specifies that according to Al-Fārābī (in the *Treatise on Analysis*) and Averroes (in his *Summary of Logic* and *Treatise on Topics*), "heuristic topics is restricted to the part of the *Topics* of Aristotle that relates to the topics of accident, and so to book 2 of this work [...] the two authors make a division between, on the one hand, the topics of accident which, as the texts of Averroes specifies, establishes the simple existence of a thing, and on the other hand the *topoi* of genus (to which are attached those of the differentia), of the *proprium* and of definition, which are directed, in the last analysis, towards definition, or more precisely towards the procedures which tend to verify the adequate or inadequate character of a definition" (*ibid.*, pp. 45-46). This discrimination between the *topoi* concerning accident on the one hand, and the other three predicables on the other hand, bears resemblance to Slomkowski's interpretation of the topics of accident in book II: "Topoi of sumbebekos are more important than those of the other predicables since they deal with the level of belonging only, which is common to all the other predicables as well. Thus they can also be used for destruction of the genus, proprium and definition" (Slomkowski, *Aristotle's Topics*, p. 94; see the whole ch. 3, in which Slomkowski examines Sirati's and Brunschwig's similar views).

¹⁸⁸ These two Arabic authors traced the "productive character of topics" back to Aristotle, who in the *Prior Analytics* [Aristotle, *Prior Analytics*, I.27, 43a22-24 (in Barnes, *Complete Works*, vol. 1, p. 68); see also I.32, 47a3-5] had declared that in order to "have a supply of deductions in reference to the problem proposed and [...] reach the principles relative to the problem (per quam viam accipiemus circa unumquodque principia)", it was necessary "not only to investigate the construction of deductions, but also [...] the power of making them". Moreover, therein Aristotle had also affirmed to "have explained fairly well in general terms how we must select propositions: we have discussed

led these authors to reshape the relation between topics or *inventio* and analytics. And the effects of this transformation were reflected in the ordering of the Aristotelian *Organon* proposed by both Al-Fārābī and Averroes, who positioned their treatises on the topics after the treatment of syllogistic and before the discourse on demonstration.

The importance attributed to Topic as a “general heuristic” by Arabic authors clearly emerged from the beginning of Al-Fārābī’s *Treatise on Analysis*:

We must now say how one finds the [appropriate] syllogism for each given *quaesitum*, in whatever discipline it may be; [we must say] from where one acquires the premises of every syllogism that is sought with a view to a *quaesitum* and where one starts from to get them. The way to this is located first of all in the knowledge of *topoi*¹⁸⁹ [...] When the *topoi* are available to us, we analyse the given *quaesitum* into each of the two contradictory [propositions] which are contained in it, and we make of each of them a separate thesis, which we seek either to establish by producing it as a conclusion itself, or to refute by producing its opposite as a conclusion. We next analyse the thesis into its predicate and subject and we place them all – each separately – under our consideration. Then we review, inductively, each of the *topoi*, comparing it with the given thesis, until we have exhausted all the *topoi* in our possession. If in the given thesis, or in its parts, we find something that can be described by some *topos* in our possession, we have then found the syllogism by means of which we establish or refute [this thesis].¹⁹⁰

Boethius and the aforementioned Arabic authors associated the Topic or inventive part of logic with syllogisms. The Arabs, however, deemed it to be a “general heuristic” valuable for syllogistic in general. From this perspective, the Topic was not limited to dialectical syllogism alone and, accordingly, it was in strict continuity

the matter precisely in the treatise concerning dialectic [*scil.* the *Topics*]” (Aristotle, *Prior Analytics*, I.30, 46a28-30 (Barnes, *Complete Works*, vol. 1, pp. 73-74).

¹⁸⁹ According to Al-Fārābī, the *topoi* “are the universal premises of which the particular [instances] are used as major premises in each of the *syllogism which occur in each discipline*. For each *topos* includes several *particularised premises*, some of which are used in *dialectic*, others in *rhetoric*, yet others in the *sciences*, and others finally in the other intellectual disciplines” (Al-Fārābī, *Treatise on Analysis*, cited by Hasnawi, “Topic”, p. 30; italics are mine).

¹⁹⁰ Al-Fārābī, *Treatise on Analysis*, cited in Hasnawi, “Topic”, pp. 29-30.

with Analytic - the judicative part of logic. Although as a matter of principle he had acknowledged the universal utility of the *topica* for finding any kind of argument, as a matter of fact Boethius had highly emphasized the strict relation between *inventio/topica* and the *scientiae sermocinales*, dialectic and rhetoric. Insofar as it was concerned with the discovery of the proper intermediate rather than of the suitable premises, the art of the topics was primarily convenient for producing dialectical syllogisms. From this Boethian viewpoint, therefore, the *topica* was related to dialectic, which was understood as the part of logic dealing with probable or dialectical arguments. This implied a clear demarcation between *inventio* and *iudicium*, and the *topica* was limited to dialectical reasoning, while the judicative part of logic inclined towards apodictic syllogistic.

The medieval commentators of the *Topics* followed in the footsteps of Boethius in linking the *ars topica* or *inventio* with dialectic, dialectical syllogism and the *Topics*. It was thus obvious for them to match the *iudicium* with the *Prior* and *Posterior Analytics*, and the *inventio* with the *Topics* and *Sophistical Refutations* – which were often considered as an appendix to the *Topics*. Furthermore, the Aristotelian text upon which they commented seemed to justify this association. Indeed, in his description of the questioner's task, which opens the first book of the *Topics*, the Stagirite had affirmed that the treatise aimed at explaining the way to *find* the proper method for producing *dialectical deduction*: “Propositum quidem negotii est methodum *invenire* a qua poterimus *syllogizare* de omni problemate ex probabilibus”.¹⁹¹ The subject-matter of the *Topics* was *syllogizare* (συλλογίζεσθαι) and *syllogismus* (συλλογισμός, namely “dialectical deduction”), as Aristotle himself had stated. What did the terms *syllogizare* (συλλογίζεσθαι) and *syllogismus* (συλλογισμός) mean according to the Scholastic commentators of the *Topics*? How did they understand *invenire* and, more generally, *inventio* or *ars topica*? And how did they relate it to the *iudicium*, to general logic and to the books compounding the *Organon*?

¹⁹¹ Aristotle, *Topics*, I.1, 100a19-24 (AL, p. 5, 3-4).

Chapter Three. What kind of pluralism of forms in syllogism?

3.1 Logical form and logical matters, dialectical form and dialectical matter: On some characteristic features of the earlier Parisian commentaries on the *Topics*.

3.1.1 The most ancient identified Latin Medieval commentaries on Aristotle's *Topics* were produced in Paris between the 30s and the 50s of the 13th century,¹⁹² a period in which terminism was the major intellectual trend in logic. Typically, terminist authors considered logic a sermocinal or rational science (*scientia sermocinalis* or *rationalis*) concerned with terms and their properties as well as with arguments, and dealing with concepts or intentions, rather than with *res*. The syllogism was usually understood in hylomorphic terms as compounds of matter and form and was considered the subject-matter of logic, whose various branches had the different components of the syllogism as their objects of study. Thus, according to this division of logic *penes partes syllogismi* each logical sub-discipline matched a book of the 'standard' Aristotelian *Organon*. The books of the *logica vetus*, namely the *Categoriae* and the *De Interpretatione*, took up the remote and proximal integral parts of syllogism, namely terms and propositions. Meanwhile, the books of the *logica nova* expounded on the subjective parts of syllogisms. The *Prior Analytics* treated the simple syllogism, the *Posterior Analytics* demonstrative syllogism, the *Topics* the dialectical syllogism, and the *Sophistical Refutations* the contentious syllogism. In this picture, rhetoric could not find any room as well as the other sermocinal art, grammar, whilst dialectic was subordinated to the general logic.¹⁹³

Several features characterizing terministic views about logic and its subdivision into parts were present in many commentaries on the *Topics*, which were produced from the 1230s to the 1280s in Paris – namely in the writings attributed to: 1) an

¹⁹² See Green-Pedersen, *The tradition*, pp. 225-226 and pp. 382-387, A.1, A.5, A.7, A.8-A.11.

¹⁹³ Cf. Marmo, "Suspicio", esp. pp. 156-158.

unidentified Robert (A.7);¹⁹⁴ 2) a Robertus Anglicus (A. 10);¹⁹⁵ 3) Robertus de Cilnac(h)obi (perhaps Kilwardby; A.1);¹⁹⁶ 4) Adenulphus de Anagni (A.11);¹⁹⁷ 5) an anonymous commentator which we shall label A.9;¹⁹⁸ 6) Elias (A.14).¹⁹⁹ The same general characteristics are exhibited by Albert the Great's *Expositio* (A.2),²⁰⁰ which was probably written in Cologne.

¹⁹⁴ Robert's commentary does not include book 8 and is known only from a manuscript preserved in Lisboa, Biblioteca Nacional de Portugal, Fundo Alcobaça 175 (378), ff. 1ra-113ra, to which I will refer in my analysis of Robert's commentary. According to Green-Pedersen, *The Tradition*, p. 225 and p. 385, this commentary is "probably the earliest extant" one, he dates it to the 1230s, Paris. Perhaps, a terminus post quem is the 1227-1229, the date of composition of Robert Grosseteste's Commentary on the Aristotelian *Posterior Analytics*. Robert (A.7) the commentator of the *Topics* indeed spoke of *contingentia nata* when referring to things that happen in most cases (f. 25va-vb: "omne praedicatum dialecticum est contingens natum vel in pluribus hoc est ad utrumlibet"), an expression which was used by Robert Grosseteste and Robert Kilwardby (R. Grosseteste, *Commentarius in Posteriorum Analyticorum libros*, I, 2, ed. by P. B. Rossi, Firenze: L. Olschki, 1981, p. 99; cf. also R. Kilwardby, *Notulae Libri Posteriorum*, in D. Cannone, *Le 'Notule libri Posteriorum' di Robert Kilwardby nella tradizione esegetica latina medievale del XIII secolo*, 2 vols., PhD diss. University of Cassino–University "La Sapienza" of Rome, 2003–2004, vol. 1, pp. 31–32; see P. B. Rossi, "Robert Grosseteste and the Object of Scientific Knowledge", in J. McEvoy, *Robert Grosseteste: New Perspectives on His Thought and Scholarship*, Turnhout: Brepols, 1995, pp. 53–75).

¹⁹⁵ For Robertus Anglicus (A.10) see Green-Pedersen, *The Tradition*, p. 386; I will quote from the only known manuscript containing his commentary, preserved in Oxford, Bodleian Library, ms. Canon. 403, ff. 182ra–221rb.

¹⁹⁶ The only known copy of Robertus de Cilnacobi (A.1)'s commentary is in Florence: Biblioteca Nazionale Centrale, Conv. Soppr. B.4.1618, ff. 95ra–151rb; Green-Pedersen, *The Tradition*, p. 382. A transcription of some parts of book 1 and a of a passage of book two are provided by O. Weijers, "Le commentaire sur les 'Topiques' d'Aristote attribué à Robert Kilwardby (ms. Florence, B.N.C. Conv. Soppr. B.4.1618)", in *Documenti e Studi sulla Tradizione Filosofica Medievale* 6 (1995), pp. 107–143, 308–310; some words of Weijers' transcription should be corrected: p. 124, *erratum* 'predica<men>torum' – *corrigere* 'predicatorum'; *erratum* 'inventum' (ms). – *corrigere* 'inventio'; pp. 126–127, *erratum* 'quo ad' – *corrigere* 'quoad'; p. 130, *erratum* 'demonstrativo' – *corrigere* 'demonstratio'; pp. 134–136 all the occurrences of 'predicamenta/ predicamentis/ predicamentorum' should be corrected in 'predicata/predicatis/predicatorum'.

¹⁹⁷ The commentary written by Adenulphus de Anagni (A.11) is contained in six manuscripts, listed by Green-Pedersen, *The tradition*, p. 387. According to Ott, the commentary is preserved in two redactions: 1) mss.: Brugge, Perugia, Cesena, Cambridge, München; 2) Firenze, which is an abridged version. I used the Cesena manuscript, Biblioteca Malatestiana, Plut. D. XXVI.3, ff. 43ra–106vb, which was produced in the 14th century; the marginal glosses contained excerpts from the commentary of Angelus de Camerinio ("totum quod est in marginibus istius libri est additum de scripto fratri Angeli de Camerino in 4 primis libris et in 8" f. 106vb; for Angelus see *infra*, ch. 4) and then owned by Giovanni Marco da Rimini (d. 1474), Novello Malatesta's physician. For the two different redactions see L. Ott, "Die Wissenschaftslehre des Adenulf von Anagni", in *Mélanges offerts à Étienne Gilson de l'Académie Française*, Toronto-Paris: Pontifical Institute of Mediaeval Studies – Librairie Philosophique J. Vrin, 1959, p. 466; Weijers, "Le commentaire", pp. 114–119; *Ead.*, "The Evolution".

¹⁹⁸ This anonymous fragmentary commentary, which Green-Pedersen dates to the 1250s, is preserved in a unique manuscript, Biblioteca Apostolica Vaticana, Ott. lat., 1276, ff. 155va–160vb, to which I will refer. See Green-Pedersen, *The Tradition*, p. 386, A.9.

¹⁹⁹ The commentary attributed to Elias, who does not coincide with Elia Bruneti, contains a paraphrase on the eight books of the *Topics*. I used the manuscript preserved at the Vatican Library, Vat. Lat. 4883, ff. 56ra–88rb; see Green-Pedersen, *The tradition*, p. 389, A.14.

²⁰⁰ Green-Pedersen, *The tradition*, pp. 382–383.

Many of these authors agreed in considering logic a rational or sermocinal science²⁰¹ and having as its subject matter syllogism in general. Usually, they divided this discipline as well as the books of the 'standard' *Organon penes differentias syllogismorum*, and assigned to dialectic the study of dialectical syllogism, which was dealt with in the *Topics*.²⁰² Despite this consensus on general points, differences of opinions arose on certain specific arguments.

3.1.2 A hotly debated topic focused on the principled basis for differentiating the various types of syllogisms among them. Since syllogism was deemed to be a hylomorphic compounded resulting from the union of a matter and a form, authors discussed whether matter or form was the appropriate criterion for discriminating between the various kinds of syllogisms. Robert (A.7), Robertus Anglicus (A. 10), Adenulphus de Anagni (A.11) and Albert the Great (A.2) subscribed to the doctrine of the diversity of forms between the various kinds of syllogisms. They maintained that syllogisms differentiated *essentialiter* that is in virtue of different specific forms and assigned a specific form to dialectical syllogism. On the basis of the doctrine of the diversity between substantial forms, these masters admitted an unbridgeable hiatus between the inventive (*topica*) and the judicative (*analytica/resolutoria*) parts of logic.

Other authors, such as Robertus de Cilnac(h)obi (A.1), the anonymous A.9 and Elias (A.14) endorsed the opposite opinion of the 'unity' of forms and acknowledged a mere material differentiation between syllogisms. According to this view, all (valid) syllogisms shared the unique form - that of the *syllogismus simpliciter* described in the *Prior Analytics*. This form descended into different matters - necessary, probable, impossible - thus producing various species of deductions, which were degrading instantiations of the simple syllogism, from the perfect demonstrative syllogism to

²⁰¹ Robertus Anglicus (A.10), f. 182ra: "Totum negotium logicum est de sermone [...] de illo sermone per quem significatur opus rationis quod est ordinare causam ad effectum [...] cum huiusmodi sit syllogismus quia omnis syllogismus significat ordinationem causae quae est vel consequendi vel essendi ad effectum". This passage is present almost *verbatim* in Adenulphus (A.6), f. 43ra. Also Robert de Cilnacobi (A.1) qualified logic as a sermoncinal or rational science: A.1, f. 95rb, Weijers, "Le commentaire", p. 124. On Adenulphus' prologue see Ott, "Die Wissenschaftslehre", esp. pp. 480-490; C. Lafleur-J. Carrier, *L'enseignement de la philosophie au XIII^e siècle. Autour du "Guide de l'étudiant" du ms. Ripoll 109*, Turnhout: Brepols, 1997, 2 vols., esp. vol. 2, pp. 421-446.

²⁰² Frequently, they included the *ars temptativa* in the domain of dialectic.

the imperfect fallacious syllogism.²⁰³ Unlike the alternative pluralist view, the theory of the unity of forms entailed a less rigid separation between the parts of logic, so that discovery and judgement were considered continuous sciences.

The first chapter of the *Topics* invited the masters to debate the issue about the principle in virtue of which syllogisms were distinguished from each other. Here indeed Aristotle had written that “primum igitur dicendum quid est syllogismus et quae eius *differentiae*”. He had then defined deduction (*syllogismus*) in general as a ‘discourse’ (*oratio*) in which the conclusion was necessarily drawn from the propositions or premises (“*oratio in qua positis quibusdam aliquid aliud a positis ex necessitate accidit per ea quae posita sunt*”).²⁰⁴ Subsequently, the Stagirite had explained the four types of deduction, namely demonstration (*demonstratio*), fallacy (*paralogismus*), dialectical and contentious syllogisms (*dialecticus* and *litigiosus*), in relation to the diversity of their respective matters, namely their premises:

Demonstratio ergo est quando ex veris et primis syllogismus erit, aut ex talibus quae per aliqua prima et vera eius quae circa ipsa est cognitionis principium sumpserint. Dialecticus autem syllogismus qui ex probabilibus est syllogizatus [...] Litigiosus autem est syllogismus qui ex his quae videntur probabilia non sunt autem, et qui ex probabilibus aut his quae videntur probabilia est apparens [...] primus quidem eorum qui dicti sunt [*scil.* qui ex his quae videntur probabilia non sunt] litigiosus syllogismus et syllogismus dicatur. *Reliquus vero litigiosus quidem syllogismus, syllogismus autem non, eo quod videtur quidem*

²⁰³ More precisely, these authors acknowledged a plurality of matters, proximate or arranged/complete and remote/unarranged. The idea of the unity of the syllogistic form also characterized some Commentaries on the *Prior Analytics* produced in that same period, such as Robert Kilwardby and the so called *Anonymous Aurelianensis III*. On the relevance of the couple matter-form see J. Brumberg-Chaumont, “Les divisions”. For Robert Kilwardby, see the analysis provided by P. Thom, *Logic and Ontology in the Syllogistic of Robert Kilwardby*, Leiden: E.J. Brill, 2007, esp. pp. 41-74; for the text of the *Anonymous Aurelianensis* see S. Ebbesen, “Analyzing Syllogisms or Anonymus Aurelianensis III - the (presumably) Earliest Extant Latin commentary on the *Prior Analytics*, and its Greek model”, in *Cahiers de l’institut du moyen-âge grec et latin* 37 (1981), pp. 1-20.

²⁰⁴ “First, then, we must say what deduction is, and what its varieties are, in order to grasp dialectical deduction [...] Now a deduction is an argument in which, certain things being laid down, something other than these necessarily comes about through them” (Aristotle, *Top.* I.1, 100a21-26; *AL*, p. 5, 5-10; Engl. tr. in Barnes, *Complete works*, vol. 1, p. 166; italics are mine). This definition of syllogism is almost identical to that found in the *Prior Analytics*, I.1, 24b18-20 and is very close to the Boethian definition of syllogism given in the *De topicis differentiis*.

*syllogizare, non tamen syllogizatur. Amplius autem praeter omnes qui dicti sunt syllogismos ex his quae sunt circa aliquas disciplinas convenientia fiunt paralogismi [...] Species igitur syllogismorum, ut figuraliter sit complecti, sint quae dictae sunt.*²⁰⁵

3.1.3 Thus, Aristotle's words seemed to hint at the formal unity between syllogisms insofar as he had qualified the four varieties of syllogisms as *species* falling under the genus *oratio* and had pointed that they differed in virtue of their diverse matters. This solution, however, was problematic in many respects.

More generally, it was largely acknowledged that a genus was divided into species by the (inseparable) differences, as stated by Porphyry,²⁰⁶ and not in virtue of the matter. Moreover, the genus was "predicated synonymously of the species under them". A genus and the (inseparable) differences dividing it did not admit of any gradation, and it could not be predicated more or less of the species, as any beginner student of logic could read in the *Isagoge*.²⁰⁷ With regard to the genus syllogism, this implied that the four types of syllogisms were all at the same level in the division of the set 'syllogism'. Or, in other words, the theory of the unity of form of syllogisms had as unwanted consequence that a fallacy or a formal contentious deduction was put on an equal footing with demonstration - which was normally deemed to be the highest form of deduction. Furthermore, this view was also questionable from an epistemological perspective. In fact, the material differentiation between syllogisms was grounded on the diverse epistemic status of their premises, which implied an epistemological distinction between the species of deductions. From this

²⁰⁵ "It is a demonstration, when the premises from which the deduction starts are true and primitive, or are such that our knowledge of them has originally come through premises which are primitive and true; and it is a dialectical deduction, if it reasons from reputable opinions [...] Again, a deduction is contentious if it starts from opinions that seem to be reputable, but are not really such, or again if it merely seems to reason from opinions that are or seem to be reputable [...] So then, of the contentious deductions mentioned, the former really deserves to be called deduction, but *the other should be called contentious deductions, but not deduction, since it appears to deduce, but does not really do so*. Further, besides all the deductions we have mentioned there are the fallacies that start from the premises peculiar to the special sciences [...] The foregoing must stand for an outline survey of the species of deduction" (Aristotle, *Top.* I.1, esp. 100a26-101a19; *AL*, pp. 5,6 - 6,25; Engl. tr. in Barnes, *Complete works*, vol. 1, pp. 166-167; italics are mine).

²⁰⁶ Porphyry, *Isagoge*, 9,4-5.

²⁰⁷ Porphyry, *Isagoge*, 15,20-21 (Engl. tr. in Porphyry, *Introduction*, ed. by J. Barnes, Oxford: Clarendon Press, 2006, p. 14).

perspective, the diverse types of deductions were not on the same level since since they generated various types of beliefs in the cognitive agent. A demonstrative syllogism engendered certain knowledge, while a dialectical syllogism produced a belief that fell short of certitude.

More specifically, then, the uniqueness of the syllogistic form appeared to be controversial in the case of contentious or sophistical deductions, some of which, claimed Aristotle, should not be called deductions, since they deduced only apparently. Insofar as they were formally invalid, therefore, some sophistical syllogisms were not members of the set 'syllogism'. However, the Stagirite had also added that these syllogisms "should be called contentious deductions", thus allowing for these contentious deductions to be members of the subset 'contentious/sophistical deduction'. How could the 'contentious deductions-not-deductions' simultaneously be excluded from the set 'syllogism', whilst belonging to its subset 'contentious/sophistical deduction'? How could the Aristotelian affirmation that a 'contentious deduction-not-deduction' "should be called contentious deductions, but not deduction, since it appears to deduce, but does not really do so" be coherently read?

An escamotage for overcoming these difficulties was provided by Aristotle himself, who had affirmed that his exposition had been developed *figuraliter* (τὸν φ), a term which could be interpreted in various ways, one of which is as a not strictly technical explanation.

If the supporters of the unity of the form had to face many puzzling problems, a no less difficult task awaited the advocates of the plurality of forms, since they had to harmonize their own views with the text of the *Topics* mentioned above.

3.2. The *Notitiae supra librum Topicorum Aristotelis* of Robert (A.7).

3.2.1.1 Probably, the most ancient known Latin commentary on Aristotle's *Topics* is the *Notitiae supra librum Topicorum Aristotelis* written in the second quarter of the 13th century by a master of the Parisian Faculty of Art, whom in the manuscript preserving his work is named Robert (A.7).²⁰⁸ This *lectio*-commentary offers an articulated and detailed exposition of the text, that opens a window on debates about logic and dialectic which lie behind some issue raised in the *Notitiae*. Hence it furnishes a valuable testimony of the difficulties faced by the earlier commentators while reading the *Topics*, as well as of their attempts to produce convincing answers to the questions related to the text. Moreover, Robert's work witnesses on the one hand the exegetical efforts of these earlier masters to reconcile the century-old Boethian tradition of the topics with the emerging Aristotelian tradition, and on the other hand the endeavours of commentators to place their reflections within broader philosophical debates.

According to Robert, logic concerned syllogism in general (*sillogismus simpliciter*) as its subject-matter and operated through intentions, namely high-level concepts.²⁰⁹ He divided this discipline, as well as the books which formed the *logica nova*, according to the constitutive elements of syllogism (*secundum sillogismi differentias*). Thus, he assigned to each part of logic, except for fallacy (*paralogismus*), the study of one of the types of syllogism that Aristotle had enumerated at the beginning of the *Topics*. In his view, therefore, general logic embraced three doctrines or arts, namely

²⁰⁸ In his exposition of the text, Robert often presented alternative exegeses of the passages analyzed, and at times referred to an *expositor*. On this basis, it would be not implausible that Robert's commentary is the earliest commentary *known* to us, but that it was not the earliest commentary absolutely speaking.

²⁰⁹ Robert did not expand upon the issue concerning the relation between logic and the arts of the *trivium*, and he treated the question only incidentally: "rethoricae propositiones et grammaticae uno modo continentur sub logicis propositionibus, alio modo opponuntur logicis propositionibus. Logica enim dicitur a *logos* quod est 'sermo' vel 'ratio'. 'Ratio' autem potest esse virtus discernendi veri et falsi, et sic logica opponitur grammaticae et rethoricae cum sint distincta congenerari vel in congenerari suasionis vel dissuasionis. Vel potest esse 'ratio' virtus apprehensiva animae rationalis" (A.7, f. 28rb).

the *demonstrativa*, the *dialectica*, and the *sophistica*, each of which mapped a book of the *logica nova*.²¹⁰

But how did Robert read the Aristotelian definition of syllogism, given in the opening lines of the *Topics*? And how did he understand the *differentiae* mentioned therein? Firstly, it should be noted that according to Robert, the syllogism dealt with in this passage, and more generally in the *Topics*, was the categorical syllogism. Strictly speaking, claimed Robert, the hypothetical syllogism could not be considered a syllogism since it inferred its conclusion probably, not necessarily.²¹¹ Similarly to Robertus Anglicus (A.10) and Adenulphus de Anagni (A.11), Robert explained the definition of syllogism in the light of the Aristotelian doctrine of the causes by reducing all its constitutive elements to each of the four causes.²¹² From this standpoint, the propositions or premises of a syllogism amounted to its material cause; whilst the efficient cause of the deduction consisted in the proper arrangement of terms and propositions, which yielded the conclusion by determining the valid moods in each figure syllogism. The conclusion itself was in turn the final cause, insofar as any syllogism pointed to the conclusion. The formal cause, then, coincided with the necessary relation of logical consequence of the syllogism.²¹³ This preliminary explanation was followed by an extensive literal

²¹⁰ A.7, f. 6vb: "Cum enim doctrinae dividantur secundum sillogismi differentias, sunt autem solum tres doctrinae sub doctrina quae est de sillogismo simpliciter, quare videbitur quod solum sint tres differentiae sillogismorum. Et sic apparebit quod falsigraphus non sit aliqua differentia sillogismi".

²¹¹ A.7, f. 34vb (commenting on *Topics*, II.2, 108b10): "Sillogismus ex ypotesi est sillogismus cuius illatio non est necessaria, sed probabilis, et non tenet nisi per conditionem et suppositionem". Adenulphus (A.11) agreed with Robert that the hypothetical syllogism inferred *per suppositionem* starting from premises in which the similitude between the terms was not evident. He deemed this kind of syllogism to be useless since its probative function could be performed by the *topic from a similar thing*: "per unum simile probatur aliud simile dyalectice, ergo non exigitur quod fiat ex ypotesi" (A. 11, f. 55ra).

²¹² A.7, f. 3vb: "Diffinitio sillogismi hic posita [*scil.* oratio in qua positus quibusdam aliquid aliud a positus ex necessitate accidit per ea quae posita sunt] quantum pertinet ad propositum sic est exponenda, quia melius habet exponi in libro *Priorum* ubi principaliter est intentio de sillogismo simpliciter. Sicut enim res naturales componuntur ex quatuor causis, similiter et sillogismus. Et illae quatuor causae tanguntur in diffinitione sillogismi"; see also f. 1rb-va; 4rb. For Robertus Anglicus (A.10), see f. 182ra-rb; for Adenulphus (A.11), see f. 44rb. This exegesis was not unusual, it was adopted by Robert Kilwardby in commenting the opening lines of the *Prior Analytics*. Albert did not use it in his commentary on the *Topics* (1.1.1).

²¹³ A.7, f. 3vb: "Per hoc enim quod dicit *quibusdam* tangitur causa materialis, quia propositiones, in quantum sunt unae, sunt causa materialis sillogismi; *positis* tangitur ordinatio terminorum et propositionum in modo et figura: propositiones autem et termini, in quantum modificati et figurati sunt, sunt causa efficiens conclusionis; *de necessitate* tangitur causa formalis quia necessitas est dispositio illationis propositionum ad conclusionem, quae illatio est causa formalis sillogismi; per

exegesis of the elements making up the definition of syllogism, namely the genus 'discourse' (*oratio*) and the various differences. According to Robert, at the opening of the *Prior Analytics* and of the *Topics*, Aristotle intended to define the inferring syllogism through the dismissal of the other species of discourses that fall short of syllogism (*aliae orationes que non sunt sillogismi*). The *differentiae* therefore served for excluding those discourses: 1) which were not syllogisms neither in potency nor in act, such as invalid arguments, conversion and *petitio principii*; and 2) which were not syllogisms actually, such as example, enthymeme and induction, which needed to be reduced to syllogism in order to be *formally* valid.²¹⁴

3.2.1.2 Robert's exposition of the dividing differences is indicative of his inclination toward the theory of the plurality of forms. Indeed along with his own, Robert mentioned two alternative explanations of the sense of the *differentiae*. According to one view, the differences aimed at removing the fallacies in *dictione* and *extra dictione* from the set 'syllogism'.²¹⁵ And the second interpretation took the differences as excluding the three species of reasoning, namely induction, enthymeme and example.²¹⁶ Robert dismissed these anonymous exegeses as erroneous, since they applied the *differentiae* to the genus *rationatio* or reasoning, rather than to the genus *oratio*. In doing so, they confused the inferring syllogism (*sillogismus inferens*), which Aristotle meant to define in the opening of the *Topics*,

hoc quod dicitur *aliud* tangitur causa finalis, quae quidem est conclusio". Albert the Great offered a similar explanation, even though he expressed it through its long-winded prose (1.1.3).

²¹⁴ A.7, f. 3vb. Robertus Anglicus (A.10, f. 183vb) and Adenulphus (A.11, f. 45ra-rb) offered an abridged version of Robert's explanation and mentioned only the first of the two interpretations, which aimed at removing the fallacies. A similar reading of the text is found in the marginal glosses which accompany the translation of the *Topics* in the manuscript Assisi, Biblioteca Comunale, ms, 658, f. 100r (available on line: http://www.internetculturale.it/jmms/iccuviewer/iccu.jsp?id=oai%3Awww.internetculturale.sbn.it%2FTeca%3A20%3ANT0000%3APG0213_ms.658&mode=all&teca=MagTeca+-+ICCU). On this 13th manuscript, which is one of the most important in the tradition of the translation of the *Topics*, see *infra*, ch. 5.2.

²¹⁵ This elucidation of the Aristotelian definition of syllogism was widespread. It is found in many logical *Summae* from the 12th and 13th centuries, e.g. William of Sherwood (see *Introductiones in logicam*, in C. H. Lohr – P. Kunze – B. Mussler, "William of Sherwood, 'Introductiones in Logicam' critical text", in *Traditio* 39 (1983), pp. 219-299, here p. 241) as well as at the beginning of Kilwardby's commentary on the *Prior Analytics*.

²¹⁶ This exegesis traces back to Boethius and is found also in the 12th and 13th century *Summae* as well as in commentaries on the *Prior Analytics*. Cf. Boethius, *De syllogismo categorico*, in *Id., Opera Omnia II*, ed. by J.-P. Migne, *Patrologia Latina* 64, Paris, 1860, 821B-C; Anonymus Aurelianensis III, in Ebbesen, "Analyzing Syllogisms, pp. 17-19.

with the probative syllogism (*notum faciens* or *probans sive ad propositum*).²¹⁷ *Oratio* was indeed the genus of the inferring syllogism (*sillogismus inferens*), whose instantiation was the *sillogismus simpliciter*. Whilst *rationatio* was the genus of probative syllogism, whose instantiation were the demonstrative and dialectical syllogisms:

Et quia argumentum et rationatio sunt idem, argumentum autem est ‘ratio rei dubie faciens fidem’ [cf. Boethius, *DTD*, I], manifestum est quod rationatio semper est fidem faciens et notitiam, et ita semper est in terminis specialibus. Unde sillogismus notum faciens potest esse species rationationis, sed sillogismus inferens non est species eius. Et propter hoc, cum hic diffinitur sillogismus in quantum est inferens, et hoc modo non est species rationationis, propter hoc non diffinitur per rationationem. Diffinitur autem per orationem quia sillogismus in quantum est inferens est ratio exterior sive ‘ad rationem exterius’ [*An. Post.* I.10, 76b24-25]. Oratio autem est ‘oris ratio’ et ita est ratio exterior. Et ideo diffinitur per orationem sillogismus hic et non per rationationem.²¹⁸

What does exactly mean that “duplex est syllogismus, inferens scilicet et notum faciens”, as claimed by Robert? These two species of syllogism seem to embody two autonomous facets of it. We would do well to interpret the differentiation between inferring and probative syllogisms as an attempt made by the advocates of the

²¹⁷ “Ad propositum” might derive from the *Prior Analytics*, I.27, 43a22, where Aristotle begins the section *Pr. An.* I.27-31 devoted to how to find the premises by saying: “We must now say how we may ourselves always have a supply of deductions in reference to the problem and by what road we may reach the principles relative to the problems” (“Quomodo autem ipsi idonei erimus semper syllogismorum ad propositum”) (Aristotle, *Complete Works*, vol. 1, p.68; *AL*, p. 58,22-23). The distinction between the *inferens* and *probans* syllogisms is found in other logical texts of the same period, such as Peter of Spain’s *Tractatus*: “Fallacia ista [scil. de petitione eius quod est in principio] non impedit sillogismum inferentem, sed probantem. Nam sillogismorum alius est inferens tantum, alius *inferens et probans*” (Peter of Spain, *Tractatus*, VII.148, p. 168). It is worth noting that Robert did not pair *probans* and *inferens*: for him a syllogism is either ‘inferens’ or ‘probans sive notum faciens’. For other authors who employed this division see J. Pinborg, *Logica e semantica nel Medioevo*, Torino: Bollati Boringhieri, 1984, pp. 87-88.

²¹⁸ A.7, f. 4va. Also Adenulphus (A.11, f. 45ra) and Robertus Anglicus (A.10) acknowledged that the definition of the syllogism given in the *Topics* concerned the “syllogismus inferens [...] et quia inferens solum est oris ratio, ideo genus propinquum est oratio et non rationatio” (A.10, f. 183vb).

plurality of forms to conceptually differentiate between the logical and the epistemological functions of syllogisms.

Robert described the inferring syllogism as an abstract type whose concrete token was the *sillogismus simpliciter*: the *sillogismus inferens* was an exemplar form or paradigm, which existed when instantiated by the simple syllogism. The simple syllogism was a hylomorphic compounded of a general matter, which some authors named *materia essentialis*, and of a form. The material elements were the qualified and quantified propositions, whose truth-value was not considered in this context. Constitutive material principles of the simple syllogism were also the simple components of propositions, namely the subject and predicate – Robert did not mention the copula –, which were treated as abstract terms deprived of any signification, replaceable by dummy letters. The proper disposition of the terms in the propositions, known as the syllogism's figure, and the correct arrangement of the premises on the basis of their quantity and quality, or mood of the syllogism, determined the valid syllogistic schemes. These argument-schemata were thus considered the formal cause or form of both the inferring and simple syllogisms.²¹⁹ In his explanation from the causes, the commentator seemed to privilege the form over the other three causes; accordingly, the formal principle took prominence over the material principles in his hylomorphic analysis of syllogisms.

While Robert's account of the inferring and simple syllogisms relied on Aristotle, in his description of the probative syllogism he departed from the Stagirite, and turned toward Boethius and his definitions of reasoning, argument and argumentation, which had an epistemological flavour. Robert indeed considered the probative syllogism to be a species of the genus *ratiocinatio*. The *ratiocinatio* or reasoning was nothing other than the Boethian's *argumentum*, namely the "reason producing belief regarding a matter [that is] in doubt". *Ratiocinatio* divided into two

²¹⁹ A.7, f. 4vb: "Sillogismus inferens est sillogismus exemplaris et hoc est in materia generali et dicitur esse sillogismus secundum formam. Sed est forma quae est exemplar vel paradigma et talis sillogismus habet esse in materia generali ut: "omne b. est a.: omne c. est b.; ergo omne c. est a". Isti vero termini "a.b.c". aliqua significatione speciale non habent, sed b. significat omne illud quod potest subici vel probari et c. similiter. Unde b. non est signum alicuius rei specialis, sed solum nota sui ordinis et sui situs, unde significat solum suam positionem et ordinem".

perfect species, syllogism and induction,²²⁰ whose imperfect subspecies were enthymeme and example. Consistently, Robert admitted that the two species of dialectical reasoning, syllogism and induction, were on the same level and that their subspecies had to be reduced to the respective species, namely the example to induction and the enthymeme to syllogism. Whereas from the standpoint of the *oratio*, induction, enthymeme and example were imperfect and needed therefore to be reduced to the syllogistic form.²²¹

Unlike the inferring syllogism, which was *in materia generali* and aimed at the necessary deduction of the conclusion, the probative syllogism applied to specific matters and aimed at making the conclusion known or opined. Starting from what was prior and more known, the probative syllogism was meant to produce certitude

²²⁰ Robert applied the distinction between *inferens* and *probans/notum faciens* also to induction. Considered as *illatio* or *sillogismus inductionis*, it was described in the *Posterior Analytics* II.19 and was an imperfect deduction. As *notum faciens*, namely as it was described in the *Topics*, induction was a perfect *ratiocinatio* since its formal principle was a *locus*, the topic from the whole: “Dupliciter est inductio: est inductio in terminis generalibus et specialibus. Sed in terminis generalibus sic est inferens solum, sed in specialibus sic est notum faciens. Dico ergo, ut visum est superius, quod hic [Top. I.12] determinat de inductione prout est notum faciens. Item determinat de inductione dialectica. Sed omnis inductio dialectica fit respectu alicuius praedicati, sed omne praedicatum dialecticum est contingens natum vel in pluribus, hoc est ad utrumlibet. Dico ergo quod quando fit inductio respectu alicuius contingentis natis, tunc non oportet omnia singularia sumere. Et hac de causa quia illud praedicatum inhaeret partibus ratione sui totius, habito ergo in talibus praedicatis quae insunt particularibus per suum totum quod quibusdam inest illud et habetur quod omnibus, dico ergo quod respectu talis praedicati non oportuit sumere omnia particularia. Sed potuit esse tale praedicatum quod fuit contingens ad utrumlibet et istud non infuit partibus ratione sui totius, sed ratione partium. Tale autem <praedicatum> alicui potuit abesse vel multis, et propter hoc respectu talis praedicati omnia singularia sumere oportet. Et similiter est quando est inductio in terminis generalibus. Tunc enim praedicatum non convenit partibus ratione sui totius quia non est argumentatio per habitudines. Et propter hoc dicit ibi [Post. An. II.19] Aristoteles loquens in terminis generalibus quod inductio est per omnia” (A.7, f. 25va-vb).

²²¹ A.7, f. 25va: “Dico ergo quod ipsa inductio quantum ad illationem suam imperfecta est respectu sillogismi et quantum ad ipsam reducitur ad sillogismum. Et non quantum ad notum facere [...] Postea dubitatur. Cum omnes species ratiocinationis reducuntur ad sillogismum, quem est perfecta ratiocinatio inter illas species, similiter videtur quod cum demonstrativus sillogismus sit species completissima omnium specierum sillogismi quod ad illam omnes species sillogismi debent reduci. Solutio huius est quia omnes species ratiocinationis ad sillogismum reducuntur ratione suae illationis et non ratione suae notificationis. Sed ipsae species sillogismorum ad sillogismum demonstrativum non potuerunt reduci ratione illationis quia essentialis est ratio illationis in omnibus speciebus sillogismorum”. Robertus Anglicus (A.10) and Adenulphus (A.11) subscribed to the same opinion (A.10, f. 189rb-va; A. 11, f. 51vb). Albert specified that whilst syllogism and induction were complete dialectical reasoning, nevertheless the genus *ratiocinatio dialectica* was predicated by analogy of them (Albertus, *Topica*, 1.3.4, p. 273a). These authors agreed that taken as *ratiocinationes*, example and enthymeme needed to be reduced to their perfect species, respectively the induction and the syllogism. Robert did not treat the subject, but we might suppose that in the reduction of enthymeme to the syllogistic form, the *locus maxima* had the role of the internal warrant, thus functioning as the major premise.

or opinion about the doubted proposition. Similarly to the inferring syllogism, Robert considered the syllogism *notum faciens* or *probans* as a type whose concrete instantiations were the demonstrative and dialectical syllogisms. Of the various species of *ratiocinationes*, we will concentrate on the dialectical syllogism since it was the subject matter of dialectic and of the *Topics*.

3.2.1.3 The commentator also applied the doctrine of the causes to dialectical syllogism, although he probed the material and formal causes alone, since he analysed the dialectical syllogism in hylomorphic terms. The material principles of dialectical syllogism were the dialectical terms, propositions and problems, upon which Aristotle had expanded in the first book of the *Topics*.²²² From the Aristotelian perspective, the most important feature of dialectical propositions, or premises, was their being ‘probable’, in virtue of which they were differentiated from the demonstrative ones. Indeed within the dialectical context, quantification, qualification, truth-value and necessity of propositions were not momentous. In order to be assumed as a premise in a dialectical reasoning, a dialectical proposition was required to be more evident (*notius*), that is to have a higher degree of probability than the conclusion to prove it true:

Et differentia est inter sillogismum inferentem et notum facientem quoniam propositio, quantum ad has differentias, universale <et> particulare, est principium <materiale> sillogismi inferentis; quantum ad has differentias, prius et notius, est principium <materiale> sillogismi notum facientis. Unde sillogismus inferens indifferenter est in terminibus generalibus et specialibus, sillogismus notum faciens <est> solum in terminis specialibus.²²³

²²² According to Robert (A.7), the first book of the *Topics* dealt with the material principles of dialectical syllogism, while the books from 2 to 7 treated the formal principles or *rationes inferendi* of dialectical syllogism, namely the *loci*. These books were in turn arranged around the four types of dialectical problems each of which related to one of the four predicables. Robert linked the books 1-7 to the main utility of dialectic mentioned by Aristotle, that is “for the study of the philosophical sciences” and “in relation to the principles used in the several sciences” (*Top.* I.2, 101a34-38). The eighth book explained the use of dialectical syllogism in relation to the other two utilities of dialectic, that is for intellectual training and casual encounters. Robert’s arrangement of the *Topics*, which was shared also by Robertus Anglicus (A.10, f. 189ra and 192ra) and Albert the Great seemed to be limited to the *dialectica docens* and its subject-matter alone. Albert specified that the first seven books dealt with the *dialectica docens*, while the last book dealt with the *usus dialecticae*, namely the *dialectica utens*, as *ars obviativa* and *exercitativa* (8.1.1, p. 492a).

²²³ A.7, f. 4va.

In the *Topics*, Aristotle had defined probability in terms of endoxality: the probable premises of dialectical syllogism had to be selected from among the probable opinions, and propositions believed or accepted by specific groups of people.²²⁴ At the end of the *Prior Analytics*, the Stagirite had offered a further, different elucidation of probability and probable propositions. There, indeed, they were considered in the light of contingency and understood as “what men know to happen or not to happen, to be or not to be, for the most part thus and thus”.²²⁵ This definition allowed for the connection between probability and contingency, precisely with contingency as two-sides possibility, a notion elucidated by Aristotle in his treatment of modal propositions and modal syllogistic in the *Prior Analytics*.²²⁶

Robert often conflated the modal and the epistemological-endoxal account of probability into one account, and consequently employed the terms probable and contingent interchangeably when dealing with probable propositions.²²⁷ In the first book, he did not clearly demarcate between the proposition as matter of syllogisms on the one hand and the subject-matter of the proposition on the other hand, between a probable-contingent proposition – namely a proposition in which there

²²⁴ See *supra*, ch. 2.2.

²²⁵ Aristotle, *Prior Analytics*, II.27, 70a3-5, in Barnes, *Complete Works*, vol. 1, p. 112; the Latin translation rendered ‘probability (τὸ εἰκὸς)’ as ‘verisimilis’: “Verisimile quidem est propositio probabilis; quod enim ut in pluribus sciunt sic factum vel non factum aut esse aut non esse” (Aristoteles, *Analytica Priora*, in Aristoteles Latinus, III 1-4: *Analytica Translatio Boethii, Recensio Florentina*, Bruges-Paris: Desclée de Brouwer, 1962, p. 137, 10-12). Cf. also *Posterior Analytics*, I.30, 87b22.

²²⁶ In the thirteenth chapter of the first book of the *Prior Analytics* (I.13, 32b5-11), which expanded upon possibility propositions, the Stagirite had clarified the two meanings of ‘being possible’ (*contingere*). In one sense, possibility-contingency meant those things which were neither impossible *nor necessary* and which were said to “happen for the most part and fall short of necessity, e.g. a man’s turning grey [...] or generally what naturally belongs to a thing”. In the second sense, possibility amounted to the indeterminate contingency and meant things are not impossible and “which can be both thus and not thus”.

²²⁷ A.7, f. 7vb: “Propositio habet esse ab ordine praedicati ad subiectum. Huiusmodi ordinatio est secundum idemprimitatem et haec idemprimitas aliquando est substantialis, aliquando accidentalis. Quando est substantialis, tunc est propositio necessaria, quando est accidentalis, tunc est propositio contingens. Et sic possibile est propositiones ex quibus fit illatio esse contingentes vel necessarias. Sillogismus vero perficitur a conclusione illata quae conclusio causalis est, et ita dicit comparisonem causae ad causatum. Ordinatio ergo quae est in sillogismo est causae ad causatum. Huiusmodi ordinatio est essentialis unde cum est, semper est, et est necessaria; cum vero non est, tunc est impossibilis”. However, while discussing the topic of accident concerning things which occur of necessity, for the most part or *ad utrumlibet* (*Top.*, II.2, 109b14-29) Robert (A.7) was more precise. Here, indeed, the commentator distinguished clearly between natural and logical modalities (A.7, f. 44rb-va).

occurs a modal operator such as “all human are possibly healthy” – and an assertoric proposition whose content was a contingent fact, such as “All mothers love their children”, which is not a modal possibility proposition, yet is possibly true. Despite the absence of any overt claim about that, Robert seemed to consistently treat demonstrative syllogisms, whose matter was necessary, and dialectical syllogisms, whose matter was contingent, not as modal syllogisms but as assertoric syllogisms whose premises described necessary or contingent states of affairs.

An illuminating case of Robert’s oscillating attitude is his treatment of the variety of syllogisms’ matters listed by Aristotle in his description of syllogisms (*Topics*, I.1). Robert explained it in the light of the basic differentiation between necessary and contingent beings. Necessary things were the necessary matter of the most perfect argumentation (*demonstratio*) and were therefore dealt with by the most perfect science, namely the *demonstrativa* or metaphysics, which through demonstrative reasoning produced *certitudo* about necessary things in the epistemic agent. Contingent things which happened in most cases (*frequenter et ut in pluribus*) were intrinsically uncertain and were the probable matter of dialectical syllogism.²²⁸ The indeterminacy of contingent beings at the ontological level was reflected at the gnoseological level in terms of uncertain beliefs. The cognitive agent knew contingent items through the ‘virtute opinativa’ therefore he could only have opinion, namely a reasoned but still not completely certain belief, about them.²²⁹ Contingent beings which happened rarely were the matter of contentious syllogisms:

²²⁸ A.7, f. 1rb: “Cum omnis res supra quas fit demonstratio habeat esse necessarium et perpetuum, et hoc modo erit omnis demonstrativa analitica, quia in omni est convertentia terminorum; sed ista convertibilitas est secundum naturam rei et non secundum habitudinem terminorum [...] omnes enim res supra quas dicimus dialecticam esse sunt res probabiles et contingentes et ideo non habent esse necessarium”.

²²⁹ Robert did not face the problem of whether a necessary item could be known imperfectly thus not insofar as it is necessary but as a contingent item. In order to have an opinion about a doubted conclusion, at times multiple dialectical syllogisms are required. Indeed, the dialectical deduction might assume a weak middle term or *locus*: “quando est medium debole ut quando sumitur a loco qui est a communiter accidentibus vel ab aliquo alio loco debili, quia igitur facere opinionem non convenit cuilibet sillogismo dialectico. Propter hoc non diffinitur per finem suum dialecticus sillogismus quia illa diffinitio non esset universalis, sicut diffinitur demonstratio per finem suum [...] dialectici vero sillogismi per media possunt augeri, plura enim media dialectica possunt adduci ad idem ostendendum, potest enim aliquid ostendi per locum a diffinitione, a genere, a simili, ab oppositis et sic de aliis” (A.7, f. 5va). Cf. Robertus Anglicus (A.10, f. 184ra).

sillogismi differunt per materiam secundum quod materiam illorum est completior et perfectior [...] sicut enim quaedam res, quae sunt et quae non possunt non esse et haec sunt semper et de necessitate. Huiusmodi autem res sunt materia sillogismi demonstrativi. Aliae vero res non sunt neque possunt esse et huiusmodi sunt impossibiles et sunt materia sillogismi falsigrafi. Aliae vero res sunt quae possunt esse et non esse et huiusmodi sunt contingentes. Sed contingens duplex est, quaedam enim contingens est frequenter et in pluribus, et de tali contingenti est dialecticus sillogismus, quaedam contingens et raro et de tali est litigiosus. Res autem necessariae magis sunt completae quam contingentes et res contingentes quam impossibiles.²³⁰

Thus, the explanation of the definition of simple syllogism given at the beginning of the *Topics* offered Robert the opportunity to develop a modal interpretation of the notion of probability, which eventually described objective features of the world. He also spelled out a subjectivist and epistemological interpretation of probability in his elucidation of the Aristotelian definition of *probabilia* (ἔνδοξα) as what “videntur omnibus aut pluribus aut sapientibus, et his vel omnibus vel pluribus vel maxime notis et probabilibus [et praecipuis]”.²³¹ The commentator explained these lines as delineating a gnoseological and endoxal hierarchy. All men were naturally equipped with cognitive skills, which needed to be actualized to become fully operative. The majority of people, however, did not attain this goal and remained within the boundaries of sensible knowledge, which was uncertain and weak. And only few people - the wise - achieved intellectual knowledge, which had a higher degree of certitude. Only a small minority of savants, then, were able to properly actualize all the potentiality of human intellect, which allowed them to grasp the most difficult things and to disclose the *secreta naturae*:

Sciendum autem quod differentiae probabilis accipiuntur a parte videntis et non a parte rei visae [...] Quoniam acceptio plurium est acceptio debilis et incerta, sed acceptio sive visio sapientium est visio certa et firma. Et propter eius

²³⁰ A.7, f. 4vb; cf. also f. 7va. Cf. Robertus Anglicus (A.10, f. 182ra).

²³¹ Aristotle, *Topics*, I.1, 100a19-24, *AL*, pp. 5,18-6,1.

certitudinem est quod visio paucorum sapientium vel etiam unius sapientis facit aliquid esse probabile, sed visio plurium, cum sit incerta et debilis, si sunt pauci de numero plurium, non facit aliquid esse probabile. Similiter neque visio multorum de numero plurium potest facere aliquid esse probabile, sed oportet quod sit visio omnium plurium ad hoc quod illa visio faciat aliquid probabile. Et propter hoc non dividitur haec differentia 'pluribus' in plures differentiae, sicut haec differentia 'sapientes' contingit dividere tripliciter.²³²

Robert's exegesis was characterized by an overt gnoseological tone. The degree of development of the cognitive capacities constituted the relevant criterion for evaluating the degree of probability of propositions and it replaced the extrinsic justification which was proper to the genuine Aristotelian account of endoxality.

3.2.1.4 Unlike the demonstrative syllogism, which shared the form with the simple syllogism and added to it the necessary matter, the dialectical syllogism not only had its own material principles, but it also had its peculiar formal principles, the *rationes inferendi* or dialectical topics.²³³

Robert claimed that the dialectical topics were absolutely necessary and thus they could warrant the necessity of the dialectical syllogism. These claims found support in the Boethian account of *loci* and *argumenta*. Boethius had stated that a *locus* was the *sedes argumenti* namely the warrant of the inference underlying an *argumentum* – or *probative syllogism* in Robert's terminology – whose concrete instance was the dialectical syllogism. Boethius had also specified that a *locus* had two aspects,

²³² A.7, f. 6ra. In Robertus' (A.10) and Adenulphus' (A.11) exegeses, the description of *probabilia* (ἐνδοξα) in terms of cognitive states was combined with the levels of understandability of the object known. Moreover, Robertus Anglicus emphasized the epistemological connotation of probability and stressed the subjectivity and relativity of that notion by comparing the pair probability-improbability with the couple truth-falsehood: "Non similiter se habet probabile ad improbabile sicut verum ad falsum quia probabile et improbabile dicunt aliquid a parte nostra, verum et falsum a parte rei. Et ideo illud quod videtur oppositum uni potest videri alteri, ideo non sequitur quod si una pars sit probabilis, quod altera improbabilis, licet sequatur si una pars vera, quod altera falsa" (A.10, f. 184ra).

²³³ A.7, f. 1ra (a transcription is provided by Green-Pedersen, *The Tradition*, p. 360): "Dialecticus syllogismus ultra principium syllogismi simpliciter non addit solum materialia principia, ex quibus fiat illatio, sed addit [...] principia quae sunt rationes inferendi, scilicet formalia principia, quae loci appellantur [...] dialecticus syllogismus novam formam addit ultra syllogismum simpliciter". We would do well to understand formal and material principles not as particular instances, but rather as two general classes to which belong specific classes. Within the general class of *principia materialia* are the specific classes of type-terms, type-propositions and type-problems. Within the general class of *principia formalia* are the specific classes of the *locus 'maxima propositio'* and of the *locus differentiae*.

namely the *locus differentiae* and the *locus 'maxima propositio'*.²³⁴ The maximal propositions were known per se, undemonstrated and indemonstrable, and were therefore suitable for imparting force to arguments.²³⁵ The differences of the maximal propositions (*locus differentiae*) were conceived of by Boethius as general terms, such as genus, species, definition, cause.²³⁶ And it was the *locus differentiae* that Robert had in mind when he affirmed that the principles of inferences were concepts (*intentiones*) such as genus, definition, species etc. Consistent with his idea of the priority of metaphysics over dialectic, Robert claimed that these general concepts were derived from being qua being, and therefore they fell into the field of metaphysics rather than of dialectic.²³⁷ So the dialectician could not provide himself with these general concepts, but he could borrow them from the metaphysician or demonstrator. The dialectician derived also the necessary maximal propositions – such as “whatever is predicated of a species, is predicated of the genus” (“de quocumque <praedicatur> species, et genus”) and “whatever is predicated of the definition, is predicated also of the thing defined” (“de quocumque <praedicatur> diffinitio, et diffinitum”) – from the metaphysician.²³⁸ Thus, the dialectical syllogism

²³⁴ “Argumenti enim sedes partim maxima propositio intelligi potest, partim propositionis maximae differentia” (Boethius, *De Topicis*, bk. 2, 1185A, Stump, *Boethius*, p. 46). On Boethius’ locus see Boethius, *De Topicis*, esp. bk. 2; E. Stump, “Dialectic and Boethius’ *De topicis differentiis*”, in Boethius, *De Topicis*, pp. 179-204; Green Pedersen, *The tradition*, pp. 39-82; Ebbesen, “The Theory of Loci”; Magnano, “Il *De topicis differentiis*”.

²³⁵ Boethius, *De Topicis*, bk. 2, 1185A-D, Stump, *Boethius*, pp. 46-47.

²³⁶ “The Differentiae of maximal propositions are called Topics, and they are drawn from the terms that make up the question [...] There are many propositions which are called maximal, and these differ among themselves; and all the Differentiae by which they differ among themselves we call Topics” Boethius, *De Topicis*, bk. 2, 1186A, Stump, *Boethius*, pp. 47-8.

²³⁷ A.7, f. 1rb and 3ra: “Intentiones dupliciter possunt considerari aut secundum veritatem aut figuraliter. Et primo modo considerantur a philosopho primo sive a demonstratore docente qui dicitur analeticus posterior. A dialectico vero considerantur figuraliter, et hoc est quod dicitur in *Philosophia Prima* quod de eodem sunt philosophia prima et dialectica, sed differunt [*Met.* IV.2, 1004b23-24]. Differunt enim dialecticus et philosophus primus fortitudine et debilitate quia philosophus primus considerat res secundum veritatem, dialecticus secundum debilitatem. Dicimus ergo quod causa et aliae intentiones prout secundum veritatem considerantur loci non dicuntur, sed prout est de hiis consideratio figuraliter et verisimilis. [...] Quaedam principia accipit dialecticus a se, sicut principia materialia ut propositiones, probleumata, et haec omnia probabilia sunt et contingentes. Sed illationem a se non accipit, sed a libro *Priorum*; similiter hoc principium <inferendi> ‘de quocumque species et genus’, ‘de quocumque diffinitio et diffinitum’, ab alio accipit scilicet a philosopho primo et haec principia quae ab alio accipit necessaria sunt et non contingentia”. Similar claims are found in Robertus Anglicus (A.10, f. 182vb).

²³⁸ These maximal propositions are more akin to the phrasing found in 13th century *Summae*, such as those of Peter of Spain and Roger Bacon, than to Boethius’ maxims given in the *De topicis differentiis*. It is not due to a mere coincidence that Robert mentioned the maximal propositions of the *locus* from

seemed to be an inference based on metaphysical necessity rather than on logical necessity. And this was consistent with Robert's assumption of the ontological ground of dialectic.

The topics granted the necessity of the dialectical syllogistic inference, just as the mood and figure granted the necessity of the simple syllogistic inference. But whilst the inference of simple syllogisms was based on conversion and on the proper arrangement of the quantified and qualified premises whose terms were abstract, the necessity of the dialectical inference had a semantic connotation, since it depended on the correct topical relation between the significative terms of the proposition (*habitus terminorum* or *loci*): "*Principia quae sunt loci et considerationes dicunt huiusmodi dispositionem terminorum et sunt dispositiones consequentes ens in quantum ens*".²³⁹

Robert circumscribed the probability of dialectical syllogisms to their material principles - thus admitting the *probabilitas consequentis*. While he openly denied that a dialectical syllogism could have a probable warrant or formal principles, and, accordingly denying that there could be a probable syllogistic inference (*probabilitas consequentiae*).²⁴⁰ The topics necessitated the dialectical syllogism from outside dialectical syllogism itself, and they did not enter into it neither as the major premise, in the case of the *locus 'maxima propositio'*, nor as its middle term, in the case of the *locus differentiae*:

the definition and of the *locus* from the genus/species. He indeed considered them the most certain topics, insofar as they were directly derived from the substance of things (A.7, f. 31va).

²³⁹ A.7, f. 52vb. One of the most hotly debated issues among 13th century logicians was whether the *Barbara* syllogism was validated by the topic "from a quantitative whole" and consequently whether the *dici de omni et nullo* amounted to the *locus 'maxima propositio'* of this topic ("quicquid predicatur de toto in quantitate, et de qualibet eius parte"). Robert did not face the question, and if he had done, it would have answered negatively, since the first-figure syllogism and the *dici de omni et nullo* concern the simple syllogism, while the topic "from a quantitative whole" falls into the camp of dialectic, therefore it can be the formal principle of a dialectical syllogism but not of a simple syllogism.

²⁴⁰ A. 7, f. 3ra: "*Sed quia dictum est quoniam forma sillogismi dialectici est necessaria, materia vero contingens, quare propter quid e contrario non posset esse scilicet quod materia sit necessaria, forma vero contingens, ita quod esset aliquis sillogismus cuius illatio erit contingens, materialia principia vero essent necessaria? Ad hoc dicendum quod [...] forma sillogismi <dialectici> semper est necessaria vel impossibilis et numquam est contingens. Materia vero sillogismi contingens esse potest*". The *probabilitas consequentiae* was instead proper to induction, as acknowledged also by Robertus Anglicus (A.10, f. 189va).

duo sunt principia syllogismi dialectici, materialia et formalia. Materialia principia sunt termini, propositiones, probleumata et haec omnia probabilia sunt et non necessaria. Sed *principium formale est ratio inferendi* sicut illatio. Et quamvis materia syllogismi sit contingens et probabilis, tamen illatio est necessaria quare et principia illationis necessaria debent esse. Sed hoc principium ‘de quocumque <praedicatur> species et genus²⁴¹’ non est principium materiale syllogismi neque ex quo fiat illatio vel syllogismus. Non enim ponitur intra syllogismum, sed est principium inferendi extra syllogismum. Unde quia est principium illationis et illatio <est> necessaria, multo fortius illud principium necessitatem debet habere. Unde principia syllogismi dialectici materialia, quae intra syllogismum sunt <et> ex quibus est syllogismus, huiusmodi sunt probabilia et contingencia; sed principium extra, quod est ratio inferendi, est principium illationis, illud principium necessarium debet esse. Unde quaedam principia accipit dialecticus a se sicut principia materialia, ut propositiones <et> probleumata, et haec omnia probabilia sunt et contingentes. Sed illationem a se non accipit, sed a libro *Priorum*. Similiter hoc principium ‘de quocumque <praedicatur> species et genus’, ‘de quocumque diffinitio et diffinito’, ab alio accipit scilicet a philosopho primo; et haec principia quae ab alio accipit necessaria sunt et non contingencia.²⁴²

3.2.1.5 Robert’s claim that the dialectician derived the inference (*illatio*) from the *Prior Analytics* might seem to contradict the essential difference of the two species of syllogism claimed so far. As Robert had acknowledged, the *Prior Analytics* provided the formal and material principles of the *syllogismus inferens*. Moreover, Robert had claimed in many passages that the dialectical syllogism added the dialectical form to the form of the simple syllogism. From the previous excerpt, however, the dialectical inference (*illatio*) emerged as plainly grounded on the topical relation or

²⁴¹ Species et genus] genus et species *ms.*

²⁴² A.7, f. 3ra. This passage seems to contradict Green-Pedersen’s interpretation of Robert’s text, according to which “the actual applications of the loci to arguments take place through *maximae propositiones* which can be specified according to the subject matter actually under debate. The principle of inference itself, i.e. the *locus differentia*, the name of the locus or the class of the *maximae* possible for one locus, cannot be so specified, and is not stated in the arguments, but stands outside as a basis granting them necessity” (Green-Pedersen, *On the interpretation*, p. 44). Green-Pedersen seems to confuse the material and formal principles of syllogism by deeming the *maxima* the intrinsic principle *ex quo fit illatio*, which according to Robert however is the material principle, namely the pair of premises.

locus, and the validity of the dialectical syllogism appeared to be tied to the dialectical, namely topical, form alone.

The supposition that the pluralism of syllogistic forms presupposed two different criteria for evaluating the validity of dialectical and simple syllogisms (the latter of which should be coupled with demonstration - which shares its same form), might not be as counterintuitive as seems at first sight. As has been stated previously, the form or formal principles of simple syllogisms were the valid syllogistic schemes, which depended on the quality and quantity of syllogisms' premises, a topic dealt with by Aristotle in the *Prior Analytics*. The quantification of propositions was completely neglected in the chapter on dialectical propositions in the *Topics*, as acknowledged by Robert. Indeed he specified that although quantified premises appeared in dialectical syllogisms, nevertheless the type of quantification of dialectical propositions was substantially different from that of the premises of a simple syllogism.²⁴³ This clue however is not conclusive, and we would do well to look for stronger evidence supporting the hypothesis that the logical and dialectical validities were evaluated on the basis of two independent criteria. The analysis of the contentious syllogism will assist us in our search.

In his treatment at the beginning of the *Topics* of the various types of deduction, Aristotle had claimed that a fallacious syllogism (*litigiosus syllogismus*) is

ex his quae videntur probabilia non sunt autem, et qui ex probabilibus aut his quae videntur probabilia est apparens [...] primus quidem eorum qui dicti sunt [*scil.* qui ex his quae videntur probabilia non sunt] litigiosus syllogismus et

²⁴³ The issue was addressed in his commentary on the opening line of the second book of the *Topics*, "Of problems some are universal, other particular" (II.1, 108b34) by Robert (A.7, f. 37va-vb), whose answer bore resemblance to the solution proposed by Robertus Anglicus (A.10): "Ad primum dicendum quod quaedam est quantitas et qualitas causata a parte sermonis et non a parte rei et talis quantitas et qualitas est cum dicitur: 'omne b. est a.' quia a parte rei indifferenter possum inferre vel dicere 'nullum b. est a.' et 'aliquod b. non est a.' et sic universale et particulare secundum quod dicunt talem quantitatem et affirmativam et negativam talem qualitatem sunt differentiae propositionis inferentis. Est alia quantitas et qualitas causata a parte rei et talis qualitas et quantitas est in syllogismo dialectico. Unde universale <et> particularem secundum quod dicunt talem quantitatem sunt differentiae syllogismi dialectici et sic affirmativum et negativum secundum aliud dicunt et talem qualitatem, quia non possum affirmare vel negare pro velle meo" (A.10, f. 189ra and 192ra); even though he was not so precise, Adenulphus agreed in considering differently the quantity of premises of dialectical and simple syllogisms (A.11, f. 50vb).

syllogismus dicatur. *Reliquus vero litigiosus quidem syllogismus, syllogismus autem non, eo quod videtur quidem syllogizare, non tamen syllogizatur.*²⁴⁴

This puzzling passage prompted medieval commentators to spell out subtle explanations in order to avoid unwelcome outcomes. The principal point to clarify was whether the fallacious syllogism was defective in relation to the inferring or probative syllogism and their respective instantiations. Or, in other words, whether it was the simple or dialectical form which was invalid. And whether it was the general (*essentialis*) or specific matter which was invalid; and, moreover, in what sense a materially fallacious syllogism was a syllogism or not: did it conclude logically or dialectically? The description of the contentious or fallacious syllogism seemed to insinuate three ways in which a deduction could be vicious, namely a) materially: if its premises were apparently but not really probable; b) formally: if the conclusion appeared to be necessarily yielded by the premises, but it was not really so; c) both in matter and in form. On the basis of Aristotle's words, then, only the materially fallacious syllogism was a syllogism. And syllogisms formally defective, namely b) and c), were not syllogisms properly speaking, although they were contentious or fallacious syllogisms. This reading of the text was adopted by Robertus Anglicus (A.10), Adenulphus de Anagni and Albert the Great. According to Robert (A.7), however, this threefold division inadequately represented the fallacious syllogism because it contrasted the fallacious syllogism to the simple syllogism, while the proper term of comparison for fallacious syllogisms was instead the dialectical syllogism.²⁴⁵ Thus Robert tried to make up for this mistake by

²⁴⁴ "Again, a deduction is contentious if it starts from opinions that seem to be reputable, but are not really such, or again if it merely seems to reason from opinions that are or seem to be reputable [...] So then, of the contentious deductions mentioned, the former really deserves to be called deduction, but the other should be called contentious deductions, but not deduction, since it appears to deduce, but does not really do so" (Aristotle, *Top.*, I.1, esp. 100b24-101a19; *AL*, pp. 6,1 - 9; Engl. tr. in Barnes, *Complete works*, vol. 1, p. 167; italics are mine).

²⁴⁵ A.7, f. 4va: "Sophistici enim sillogismi qui determinantur in libro *Elenchorum* non deficient a sillogismo simpliciter sicut inutiles coniugationes, quae determinantur in libro *Priorum*. Inutiles enim coniugatio deficit a necessitate illationis quae causatur ex qualitate et quantitate propositionum et ordine earumdem. Sophisticus autem sillogismus deficit a necessitate illationis quae causatur ex habitudine terminorum, quae quidem habitudines sunt loci dialectici, qui in libro isto [*scil. Topicis*] determinantur". Although he agrees with Robert that the fallacious syllogism is deficient in relation to the dialectical syllogism, Adenulphus accepts the threefold distinction of the fallacious syllogism. His explanation of the passage seems to incline more toward the solution provided by the advocates of the unity of forms (see *infra*, ch. 3.5) rather than to the view endorsed by pluralists such as Robert

discarding the threefold division of the fallacious syllogism and by adopting a bipartition in place of it. If set against a dialectical deduction, a fallacious syllogism could be vicious 1) in matter or 2) in form.

1) A materially fallacious syllogism had premises that “seem[ed] to be reputable, but [we]re not really such,” nevertheless the conclusion followed necessarily from the premises.

2) A formally fallacious syllogism was defective insofar as “it merely seem[ed] to reason”: its inference was dialectically invalid since it was grounded on sophistical topics. As we have seen, Robert had stated that the essential differentiation between syllogisms relied rather on differences between their form or formal principles, the *rationes inferendi* or *loci*, than on the material diversity. For this reason, he deemed the distinction between b) and c) to be erroneous, since it was held on the basis of material differences, namely the truly or merely apparently probable premises. Insofar as b) and c) grounded on the same formal principle, the *loci sophistici*, they did not differ from each other.²⁴⁶ Robert’s interpretation offered a solution to the puzzle concerning the ‘contentious deductions-not-deduction’. A formally fallacious syllogism was a *litigiosus syllogismus* if it was considered as simple syllogism, whilst it was not a syllogism (*syllogismus autem non*) if it was understood as a dialectical syllogism.

Let us consider the syllogism **I** “Every dog is something that can bark; every marine animal is a dog; therefore, every marine animal is something that can bark”. With regard to the *sillogismus simpliciter*, which disregarded the signification of terms, **I** was a valid first-figure syllogism. Considered as a *sillogismus probans vel ad propositum*, whose necessary *illatio* rested on semantics consideration, the syllogism **I** could not be considered a syllogism at all. It was a fallacy ‘of words’ (*in dictione*),

(A.7) and Robertus Anglicus (A.10). Adenulphus indeed explained that even though syllogism a) lacks the *materia dialectica*, yet it is a syllogism in virtue of the remote matter, namely the three terms and the two premises. While b) and c) were not syllogisms insofar as they were deficient in the dialectical form and, consequently, in the *inferens* form too (A.11, f. 45v).

²⁴⁶ A.7, f. 7va: “Erunt duae differentiae sillogismi litigiosi scilicet sillogismus litigiosus peccans in forma [materia *ms.*], et hic continebit sub se sillogismum qui peccat in forma tantum vel in utroque, eo quod uterque eandem formam habet [*scil.* locum sophisticum]. Unde non faciunt duas differentias sillogismi litigiosi sed unam. Alius vero est qui est sillogizatus ex apparentibus, faciens aliam sillogismi differentiam, et hoc est quia iste habet formam differentem [*scil.* locum dialecticum] ab aliis sillogismis et ideo sunt duae differentiae sillogismi litigiosi”.

specifically the first species of equivocation. The term ‘dog’ was indeed polysemantic and it was used equivocally in the major and minor premises, respectively as the terrestrial and marine animals:

Dicimus ergo quod sillogismus litigiosus impedit sillogismum ad propositum sive sillogismum notum facientem et non sillogismum inferentem. Cum enim dicitur ‘omnis canis est latrabile, omne marinum est canis, <ergo omne marinum est latrabile>’, si sumerentur isti termini ut designarent medium, primum et postremum, esset ibi necessitas quae causatur a qualitate et quantitate propositionum et ordine earumdem. Et sic patet quod esset ibi sillogismus litigiosus, unde sillogismus litigiosus non impedit formam sillogismi inferentis, sed est sillogismus inferens. Impedit autem *aliam necessitatem quae causatur ab habitudine terminorum et haec est necessitas sillogismi ad propositum sive sillogismi notum facientis*. Unde isti termini in quantum significationem habent specialem impediunt sillogismum <notum facientem> [...] Unde cum dicit quod ‘litigiosus sillogismus est et non est sillogismus’ hoc intelligendum est de sillogismo notum faciente et non de sillogismo inferente.²⁴⁷

Robert’s view about the fallacious syllogisms seems to support the hypothesis that the notion of dialectical validity is distinguished by and independent of the notion of formal validity of the simple syllogism. The formal validity of a simple syllogism was indeed tied to the ‘logical’ form, namely the moods and figures, and the simple syllogistic inference was based on logical necessity. While the dialectical validity

²⁴⁷ A.7, f. 7va. While elucidating this passage and an example as the one given by Robert, Albert the Great stated even more explicitly the autonomy of the criterion for the validity of dialectical syllogism: “Iste syllogismus est litigiosus, et non peccat contra formam syllogismi simpliciter, sed contra formam syllogismi ad propositum. Si enim termini positi in tali syllogismo recte se haberent in habitudine medi ad maius extremum et in habitudine medii ad minus extremum, esset syllogismus probans et ad propositum; sed quia non habet terminorum debitam habitudinem, quae est causa concludendi in syllogismo ad propositum et forma ipsius, ideo peccat contra formam syllogismi probantis, et secundum hanc formam non est syllogizatus, quamvis habeat formam syllogismi simpliciter” (Albertus, *Topica*, 1.3.3, p 242b-243a). On Albert’s exposition see J. Brumberg-Chaumont, “Les divisions”, pp. 386-394.

was tied to the dialectical form and the dialectical inference was grounded on the topical necessity (on the *habitus terminorum*).

3.2.1.5 The theory of the plurality of syllogistic forms affected Robert's understanding of the bipartition of logic into discovery and judgement. The commentator denied any continuity between the judicative (*resolutiva sive analytica*) and the inventive (*topica*) parts of logic. The *resolutiva* concerned apodictic syllogistic and demonstration, which were the subject matters of the *Prior* and *Posterior Analytics*. Only the *prima philosophia*, which Robert used synonymously with *demonstrativa*, dealt with deduction whose middle term was the cause of the conclusion.²⁴⁸

Dialectic was the inventive part of logic (*topica*) and was covered by the *Topics*. We may wonder whether Robert conceived of the *topica* as a "general heuristic" for finding the premises and/or the middle terms of any type of deduction. The commentator spent many efforts trying to explain that the *topica* was aimed at discovering the middles and not the premises of syllogisms. More specifically, it intended to find the dialectical middle alone.²⁴⁹ Accordingly, he limited the *topica* to dialectical reasoning and dialectic. Robert scrutinized the hypothesis that the topics of accident could be regarded as a universal heuristic method concerned with the existence of thing (*de inesse simpliciter*). This assumption found some support in the second of the two definitions of the predicable 'accident' found in the *Topics*. Here, Aristotle had affirmed that an accident is "something which may either belong or not belong to any one and the self-same thing" ("accidens est quod inest autem rei et contingit inesse cuilibet uni et eidem et non inesse"),²⁵⁰ and that this qualification of accident was the most suitable. Robert however reckoned as most appropriate the

²⁴⁸ A.7, f. 1ra-rb, 4rb. Robertus Anglicus (A.10) endorsed the same view: see f. 182ra.

²⁴⁹ While the demonstrative middle term was the cause of the connection between the extreme terms of syllogism, the dialectical middle term was only a probable sign: "In dialectici medium non est causa propter quam est, sed propter quam accidit conclusio [...] Cum medium dialecticum accipitur sub istis intentionibus localibus, quae intentiones dividuntur per istas differentias genus, species, diffinitio, diffinitum, causa, causatum et sic de aliis, medium demonstrativum accipitur solum sub hac intentione 'causa' [...] dialecticum medium non est causa esse, sed inferendi et consequendi solum. Sed intentio entis sub qua medium demonstrativum accipitur causa est esse" (A.7, f. 1ra).

²⁵⁰ Aristotle, *Topics*, I.5, 102b5-7 (AL, p. 11, 1-3). This view has been endorsed by some modern scholars, such as Brunschwig, Sairati and Slomkowski (see *supra* ch. 2.2).

first definition of accident as “something which, though it is none of the foregoing, i.e. neither a definition nor a property nor a genus – yet belongs to the thing”. Therefore, he excluded the reading that Aristotle had conceived the topics of accident as pertaining to the predication *de inesse simpliciter*. Indeed for Robert, the topics about accident, which were found in the second book of the *Topics*, dealt with accidental predication properly speaking (“de inesse in quantum contrahitur et determinatur ad accidens”).²⁵¹

3.3 A further step forward: Robertus Anglicus (A.10) and Adenulphus de Anagni (A.11).

3.3.1 The theory of the plurality of forms characterizes also two *Topics* commentaries written in Paris by an unidentified Robertus Anglicus (A.10)²⁵² and by Adenulphus de Anagni (A.11), “horum librorum non imperitus interpret”.²⁵³ The works of these

²⁵¹ A.7, f. 36rb; see also f. 15va-vb. Robertus Anglicus (A.10) and Adenulphus (A.11, f.55va) devoted some *dubia* to this issue; they answered that the topics concerning accident could not replace the other topics nor could they function as general topics of inherence since they did not concern substantial predication, but were limited to accidental predication.

²⁵² Plausibly, Robertus’ *lectio*-form commentary was written in Paris. Green-Pedersen dated it to the 1250ca., I would incline to postpone its composition to after 1266, a *terminus post quem* with which Robertus himself provided us in his discussion of fallacious syllogism. In order to explain that a materially fallacious syllogism was a syllogism, Robertus recast the metaphor of the coin, which Algazel employed in his *Logica* in connection to fallacious syllogisms and which Albert the Great borrowed for his commentary on the *Posterior Analytics*. Robertus used it while referring to the view according to which a syllogism vicious in dialectical matter did not have the dialectical form, yet it was a syllogism since it had the simple syllogism’s form, “sicut denarius parisiensis cum peccet in materia sintluigis non est sintluigijs, tamen est parisiensis denarius” (A.10, f. 184rb). Plausibly, the *sintluigijs* mentioned by Robertus was the French *écu* or *denier d’or*, a golden coin issued by the King Louis IX in the context of the 1266 monetary reform that caused the depreciation of the ancient *denier de Paris*. Unfortunately, I could not verify whether the coin was called *sint(luigijs)* prior to Louis’ canonization proclaimed in Orvieto in 1297 – and which could therefore constitute a new *terminus post quem*. For the diverse commentary genres see Green-Pedersen, *The Tradition*, pp. 88-89; for the dating see p. 386.

²⁵³ A. Niphus, *Stagiritae Topicorum Libri Octo, cum Augustini Niphi medices suessani philosophi clarissimis commentariis*, Venetiis: apud Hieronymum Scotum, 1569, f. 6a. Adenulphus’ *lectio*-commentary was produced in Paris around the 1250s, according to Green-Pedersen and Weijers it was influential in the second half of 13th century, as testified to by the high number of manuscripts containing it, and it was still known in the 16th century, when Nifo mentioned *Hedenolphus* in his commentary on the *Topics* (1520-25). Nephew of the Pope Gregory IX and canon of Notre-Dame in Paris, Adenulphus de Anagni studied in Paris. Here, he was named *magister artium* around the 1250s, master of theology (1272ca) and became acquainted with Thomas Aquinas. In 1264, he was named Provost of the church of St. Omer, to which he had donated some philosophical and theological manuscripts. In 1286 the episcopacy of Narbonne was offered to him, but he refused, and in 1288 he was named bishop of Paris, but declined, preferring instead to retire at the abbey of St. Victor where he died in the

two Parisian commentators disclose several points of contact with Robert's (A.7) commentary, some of which have been signalled in various footnotes of the previous section. The undeniable abundant correlations between these texts however do not constitute evidence that the two masters had direct knowledge of Robert's (A.7) work nor that they consciously advocated Robert's (A.7) ideas, along with the basic tenets underlying them. Indeed, the similarities might have well originated from a common body of opinions shared at the Parisian Faculty of Arts. At times, the harmonious agreement of words discloses divergences of thoughts. Surely, the three authors had in common the exegesis of the definition of syllogism in the light of the doctrine of the causes.²⁵⁴ But Robertus Anglicus' (A.10) and Adenulphus' (A.11) explanations were more focused on the physiological, psychological and gnoseological facets than on the formal – logical – aspect of syllogism. Unlike Robert (A.7), the two masters highly emphasized both the physiological grounds and the cognitive effects of the various types of syllogism, arriving at an association of the four species of reasoning to the bodily characteristics of the four stages of life. From this standpoint, the dialectical syllogism was proper of adolescence since dialectical deduction operated through reason and phantasms in producing opinion in the cognitive agent, and *ratio* was the predominant power of the soul in adolescence.²⁵⁵

following year (March, the 26th). As a legacy, he left his manuscripts of the *Tractatus* and of the *Syncategoreumata* of Peter of Spain to the College of the Sorbonne. Adenulph was a polyhedric author. He wrote a *Summa causarum de facto et usu curiae* (immediately before 1250), 18 quodlibetic *Questions* (dating after 1272) and commented on Peter Lombard's *Sentences* and on some books of the Bible. A testimony of his preaching activity is the 12 sermons found by J.B. Schneyer in the 1960s. On Adenulphus see M. Grabmann, "Ungedruckte lateinische Kommentare zur aristotelischen Topik aus dem 13. Jahrhundert", in *Mittelalterlichen Geistesleben*, München: M. Hüber, 1956, vol. 3, pp. 142-157, esp. pp. 149-151; *Id.*, "Adenulf von Anagni, Propst von Saint-Omer (†1290). Ein Freund und Schüler des hl. Thomas von Aquin", *Ibid.*, pp. 306-322; C. B. Lohr, "Medieval Latin Aristotle Commentaries", in *Traditio* 23 (1967), pp. 313-413, esp. pp. 324-325; Ott, "Die Wissenschaftslehre"; O. Weijers, *Le travail intellectuel à la faculté des arts de Paris. Textes et maîtres (ca. 1200-1500)*, Turnhout: Brepols, 1994, vol. 1, pp. 32-33.

²⁵⁴ A.7, f. 3vb; A.10, f. 182ra-rb; A.11, f. 44rb.

²⁵⁵ "Si <sillogismus> dividatur penes causam efficientem, ut causa ipsius sillogismi sit ipsa ratio, aut erit sillogismus prout ipsa ratio elevatur ad intellectum aut prout deprimitur ad fantasiam aut prout stat in medio. Si dividatur per statum hominis, hoc potest esse quadrupliciter causa: pueritia, adolescentia, iuventus et senium. Dum homo in puericia est, generatur in eo fantasma per sillogismos sophisticos, dum est in adolescentia generatur in eo opinio per sillogismum dialecticum, dum est in iuventute generantur in eo scientia per sillogismum demonstrationis, dum est in senectute generatur ignorantia per sillogismum falsigraphum. Nam senes accipiunt propositiones necessarias male tamen intellectas" (A.11, f. 44rb); cf. A.10, f. 182ra-rb, which parallels Adenulphus almost *verbatim*, and f. 182va.

3.3.2 The import of these differences can be better comprehended if contextualized within the framework of the theory of the plurality of forms, upheld by these authors. Similarly to many Parisian masters of that epoch, such as Nicolaus Parisiensis²⁵⁶ and Arnulphus Provincialis,²⁵⁷ Robertus Anglicus (A.10) and Adenulphus (A.11) admitted a two-sided syllogism, the *inferens* and *inferens et probans*. Unlike these authors, Robert (A.7) did not couple *probans* with *inferens*, since for him a syllogism could be considered either insofar as it was *inferens* or in as much as it was *probans sive notum faciens*. This terminological difference is revealing of the diverse attitudes of these masters. Robert's (A.7) analysis of the various types of syllogisms assumed the pair 'matter-form' as exegetical guide. This earlier commentator (A.7) focused on the hylomorphic structure of syllogisms and investigated deeply the interplay between the formal and material elements, conclusively acknowledging prominence to the form over matter. As a consequence of that, Robert (A.7) assigned a founding role to the topics in the production of dialectical arguments and within his system. Surely, both Robertus (A.10) and Adenulphus (A.11) agreed with Robert (A.7) about the pluralism of forms and subscribed to the view that the dialectical syllogism differed from the inferring syllogism and from the demonstration "a parte formae quia addit supra formam complexionis formam habitudinis".²⁵⁸ Moreover, they accepted Robert's (A.7) main tenet that the *loci* were the formal principles of dialectical syllogism.²⁵⁹ And that in

²⁵⁶ Nicolaus Parisiensis was student and master at the Parisian Faculty of Arts (around 1250-65), then chancellor of the same University of Paris. He commented on the Aristotelian *Organon* – and he claimed to have commented also on the *Topics*, but unfortunately his commentary is lost or not identified yet –, on Boethius' *De topicis differentiis* and perhaps on *Priscianum minorem*. Moreover, he wrote tracts on obligations and syncategorematic terms, as well as the *Summa Metenses* and a treatise on the division of philosophy, the *Philosophia*. On Nicolaus see C. Marmo, "Suspicio"; Lafleur-Carrier, *L'enseignement*, esp. vol. 2, pp. 447-465.

²⁵⁷ Little is known about Arnulfus. He was *magister artium* in Paris in the middle of the 13th century and wrote the *Divisio Scientiarum*, in which referred Al-Fārābī's 'long *Organon*' that he knew through the mediation of Gundissalinus (see ch. 2.2; see Lafleur, *Quatre introductions*, pp. 297-347; Marmo, "Suspicio"; Weijers, *Le Travail*, p. 70).

²⁵⁸ A.10, f. 182ra; A. 11, f. 44ra-rb.

²⁵⁹ While the *Topics*' commentators agreed on the necessity of the *habitudines locales*, in his *Notulae* on the Boethian *De topicis differentiis* (1255-65ca), Nicolaus of Paris denied it and specified instead that the *habitus localis* was necessary for the intrinsic topics, which were derived from the substance of things. And it was merely probable in the case of the extrinsic and middle topics: *aliquando necessaria, aliquando non*. *Necessaria est sicut in habitudine definitionis ad definitum; non necessaria est sed probabilis sicut in loco a maiori et in aliis locis extrinsecis, ibi enim non est aliqua necessitas, sed probabili<ta>s solum* (the transcription is provided by Green-Pedersen, "Discussions", pp. 65-66).

as much as they were necessary, the *habitudines locales* secured the necessity of the dialectical inference.²⁶⁰ Notwithstanding these claims, the loci were less relevant in Robertus' (A.10) view. And they were relegated to the margins of Adenulphus' general account of dialectical reasoning.²⁶¹ Unlike Robert (A.7), they did not develop deep reflections neither on the specific form of dialectical syllogisms nor on the *loci*. In their accounts, the centre of the scene was occupied by the cognitive agent, in relation to which both masters described the differences between the types of probative syllogism. In addition to the standard division between *inferens* and *notum faciens* syllogisms, which they shared with Robert (A.7), Adenulphus and Robertus (A.10) added a further subdivision of the syllogism *notum faciens* into: 1) *ad propositum* syllogism: it was probative only *a parte rei notae*; and 2) demonstrative and dialectical syllogisms: they were probative *a parte rei notae et cognoscentis*. The *syllogismus notum faciens* was said analogically of these two instances, since these two types of probative syllogism caused different cognitive effects or habits in the agent.

²⁶⁰ A.10, f. 182va "Quaedam sunt principia formalia dyalectici sillogismi et huiusmodi sunt maximae maxime propositiones sive loci, et huiusmodi sunt necessaria. Quaedam vero <sunt> principia materialia, ut maior propositio et minor, et huiusmodi sunt contingentia et sumit dyalecticus"; cf. A. 11, f. 44va: "sillogismi duo sunt principia, materialia et formalia. Materialia sunt propositiones, formalia dicuntur intentiones. Quantum ad principia materialia quae sunt propositiones sillogismi, dyalecticus est ex contingentibus, quantum ad formalia quae sunt habitudines, quia habitudines sunt necessaria, sic est sillogismus ex necessariis".

²⁶¹ The nonessential role acknowledged to the *loci* by Adenulphus seems to be confirmed by his subdivision of the books of the *Topics* according to their respective subject-matter. Robert (A.7) and Robertus (A.10) had considered the first book of the *Topics* to be dealing with the material principles of dialectical syllogism, and books 2-7 to be concerned with its formal principles, namely the *loci*. Then, they linked books 1-7 to dialectics' directness towards "the study of philosophical sciences". Adenulphus seemed instead to endorse a different view, according to which the first book covered the *dialectica docens*, while the remaining books treated the *dialectica utens*: "determinavit Aristoteles de principiis sillogismi dyalectici secundum sui substantiam. In hac parte [scil. in secundo libro] determinat quoad suum usum et hoc <est> quod solet dici per alia verba quod in primo libro determinat de sillogismo dyalectico quoad eius substantiam, in aliis libri in quantum est instrumentum. Secundum hoc haec pars dividitur in duo quia contingit uti instrumento dupliciter, scilicet ad determinandum problemata et ad exercitationem et obviationem. Primo determinat de sillogismo dyalectico prout ordinatur ad terminandum problemata, in secunda <parte> prout ordinatur ad exercitationem et ad obviationem, et hoc facit in octavo. Et hoc est quod solet dici per alia verba quod ipsis libris determinat de dyalectica inquisitiva, in octavo de dyalectica obviativa et exercitativa" (A.11, f. 55rb). Green-Pedersen ("On the interpretation", p. 15) supposed that Adenulphus' opinion was the same as Robert's and Robertus' and that it was the common way of arranging the *Topics*. In my opinion, there was general agreement among authors only regarding the last book: "constat secundum omnes expositores [scil. Adenulphus, Robertus A.10, Albert the Great] quod in illos VIII determinatur de syllogismo dyalectico obviativo" (Simon of Faversham, *Quaestiones Veteres*, in *Id., Quaestiones super Libro Elenchorum*, ed. by S. Ebbesen et alii, Toronto: Pontifical Institute of Medieval Studies, 1984, *Quaestiones Veteres* q. 4, p. 38). While the general arrangement of books 1-7 proposed by Adenulphus was not universally accepted; it was adopted by the authors who endorsed the view of the unique form.

The demonstrative syllogism indeed generated knowledge, a complete habit, while the dialectical syllogism generated opinion, which was an imperfect habit:

loycae divisio propter hoc recipit divisionem penes divisionem veri. Sed verum quoddam est complexum, quoddam incomplexum. Si sit complexum, sic de ipso est libro *Praedicamentorum* et Porphyrii [scil. *Ysagoge*] et *Sex Principiorum* [...] si sit complexum [...] complexum ex complexis, sic est scientia de syllogismo, sed hoc potest esse dupliciter cum duplex est syllogismus, quidam inferens tantum, quidam inferens et notum faciens. Si sit inferens tantum, sic de syllogismo determinatur in libro *Priorum*, quod habet fieri in terminis generalibus usque ad illud capitulum *quo autem ydonei erimus* [scil. *An. Pr.* I.27, 43a20]. Si sit syllogismus inferens et notum faciens, hoc est dupliciter: aut faciens notum a parte rei cognitae aut a parte rei <et> cognoscentis. Si faciat notum a parte rei cognitae, sic est syllogismus ad propositum de quo determinatur in illo capitulo *quomodo autem ydonei erimus*. Si faciat notum a parte rei et cognoscentis, aut generat scientiam et sic est syllogismus demonstrativus, aut generat bonam opinionem et sic est syllogismus topicorum²⁶² aut generat fantasiam et sic est sophisticus, aut generat ignorantiam et sic falsigraphus.²⁶³

3.3.3 This passage revealed another important divergence between Robertus (A.10) and Adenulphus on the one hand, and Robert (A.7) on the other hand. Their different opinions about the probative syllogism implied a different arrangement of the books of the *logica nova*. By admitting a unique *syllogismus* instantiated by different types of syllogisms, Robert (A.7) adopted a unifying reading strategy for the *Prior Analytics*. On the contrary, having divided the syllogism *notum faciens* and having based the organizational principles for the *Organon* on the *divisio syllogismi*, Robertus and Adenulphus had to accommodate their arrangement of the *logica nova* to their subdivision of syllogisms. Thus, they split the *Prior Analytics*, thereby following some authors of that epoch such as Nicolaus Parisiensis. According to this

²⁶² Topicorum] topicum in Brugge, Bibliothèque publique de la ville, ms. Cod. 493, dialecticus in Firenze, Biblioteca nazionale centrale, ms. Conv. Soppr. A. 2. 2840.

²⁶³ A. 11, f. 43vb; cf. A. 10, f. 182ra.

division, the first twenty-six chapters of the first book were concerned with the inferring syllogism, the 27th chapter of the 1st book of the *Prior Analytics* dealt with the probative syllogism *ad propositum*, the demonstrative syllogism was the subject-matter of the *Posterior Analytics*, and the dialectical of the *Topics*.²⁶⁴

The different views about the probative syllogisms and the internal ordering of the *logica nova*, which were upheld by Robertus (A.10) and Adenulphus (A.11) on the one hand, and Robert on the other hand, did not prevent them from agreeing on the way to subdivide logic into a judicative and inventive part. Similarly to Robert (A.7), indeed, the two masters (A.10 and A.11) sharply separated the *scientia Priorum et Posteriorum* from the *scientia Topicorum* in virtue of the double form proper to dialectical syllogism, which was the subject-matter of the *Topics*. But in Robertus' (A.10) and Adenulphus' (A.11) views, this was not the major motivation behind the clear demarcation between these sciences. In accordance with the general trend towards gnoseology, which characterized their exegeses of the first book of the *Topics*, Robertus and Adenulphus traced the division between analytic and invention back to the human apprehensive powers. Discovery argued dialectically and the middle terms employed in dialectical argumentations were signs of the relation between items.²⁶⁵ These were known by the *ratio*, which was the faculty involved in discovery. Whilst the demonstration, which fell into the camp of analytics, could produce a causal explanation, or knowledge, of things since the middle terms used in demonstrative deductions were the causes of thing, which were grasped by the intellect:

Possunt diversificari a parte formae, quia addit supra formam complexionis
formam habitudinis, et sic dyalecticus et temptativus; autem non addit supra

²⁶⁴ This partition was found in the *Philosophia* of Nicolaus Parisiensis, which was probably the source for this ordering of the books. Scholars have shown that Adenulphus borrowed from Nicolaus' work much material for his prologue to the *Topics*, which constituted a concise *Wissenschaftslehre*. Cf. Ott, "Die Wissenschaftslehre", pp. 480-490.

²⁶⁵ On sign-inference in arguments see Aristotle, *Prior Analytics*, II.27. Few manuscripts of Peter of Spain's *Tractatus* defined the sign-inference in relation to Aristotle's account of enthymeme as inference that argues "ex yocotibus et signis", by saying that within that context a sign "idem est quod propositio demonstrativa vel necessaria vel probabilis et hoc est inferendo. Signum autem secundum quod hic sumitur dicit necessitatem illationis, ycos autem dicit probabilitatem ipsius propositionis in se secundum quam probabilitatem propositio videtur esse vera" (Peter of Spain, *Tractatus*, V.3, p. 57, fn. 2).

forma complexionis formam habitudinis sed materiam solum et sic demonstrativus et falsigraphus. Et ideo patet et materia non diversificet speciem neque scientiam quod debet esse una scientia continialis *Priorum* et *Posteriorum* eo quod syllogismus *Posteriorum* non addit nisi materiam supra syllogismum *Priorum*. Sed non debet esse una scientia continua libri *Topicorum* et *Priorum* eo quod non addit materiam solum, sed formam syllogismi topici supra syllogismum *Priorum*. Item quia iste procedit per signum et ille per causam et virtus apprehensibilis intendens illum est ratio, virtus apprehendens illum est intellectus, virtus apprehendens tam demonstrationem quam *Priorum* est una et eadem, scilicet intellectus, et utraque procedit per causam licet hic per causam essendi, hic per causam consequendi. Et ideo sunt unius continuationis et sunt una scientia ordinata per prius et posterius.²⁶⁶

3.4 A look back and ahead: Albert the Great.²⁶⁷

3.4.1 Albert's Paraphrases of the *Topics* was one of the most widespread commentaries on Aristotle's text and was still popular in the 16th century. The exact place and date of its composition is still uncertain, nevertheless it could be dated to the years from 1264, when Albert was in the Würzburg Dominican Convent, to the

²⁶⁶ A.10, f. 182ra. Cf. A.11, f. 44va-45ra. "In loco duo sunt, substantia loci et intentio loci. Demonstrator locum considerat secundum sui substantiam, unde considerat causam et effectum secundum sui substantiam. Quod patet: si quaeritur a demonstratore unde locus? 'fumus est, ergo ignis fuit [affuit ms.] etc', <iste> respondet ab effecto. Dialecticus autem considerat locum secundum sui intentionem et dicit: a causa" (A.11, f. 94va).

²⁶⁷ M. Grignaschi, "Les traductions latines des ouvrages de la logique arabe et l'abrégé d'Alfarabi", in *Archives d'histoire doctrinale et littéraire du Moyen Age* 39 (1972), pp. 41-107; S. Ebbesen, "Albert (the Great?)'s Companion to the *Organon*", in A. Zimmermann, *Albert der Grosse. Seine Zeit, sein Werk, sein Wirkung*, Berlin-New York: W. De Gruyter, 1981, pp. 89-103; J. Weishepl, "Albert the Great's Inventive Logic: His Exposition on the *Topics* of Aristotle", in *American Catholic Philosophical Quarterly* 70 (1996), pp. 11-49; a different view from Ebbesen's opinion on Albert's companion to the *Organon* is provided by R. Meyer, "Eine neue Perspektive im Geistesleben des 13. Jahrhunderts: Plädoyer für eine Würdigung der *Organon*-Kommentierung Alberts des Großen", in Aertsen -Speer, *Geistesleben*, pp. 189-201; J. Brumberg-Chaumont, "Les divisions"; J. Janssen, "Albert le Grand et sa connaissance des écrits logiques arabes: une réévaluation du dossier Grignaschi", in J. Brumberg-Chaumont, *Ad notitiam ignoti*, pp. 225-257; C. Steel, "Prolegomena to an edition of Albert's *Topics*", in "Przegląd Tomistyczny" 21 (2015), pp. 69-85. I will quote from: Albertus Magnus, *Topica*, in Albertus Magnus, *Opera omnia*, ed. by A. Borgnet, Paris: Vivès, 1890-1899 (38 vols), vol. 2, 1890 (hereafter Albertus, *Topica*).

1269, before he went to Cologne.²⁶⁸ It is conceded that in some of his commentaries on the *Organon*, Albert borrowed much material from other authors, especially from Robert Kilwardby and John Pagus. This claim, however, seems not to hold for the *Topics*.²⁶⁹ Undoubtedly, Albert was acquainted with the ideas commonly shared by the previous commentators, nevertheless he did not rely on a single author nor slavishly repeated what he had read elsewhere. In his paraphrase, indeed, the Dominican merged his manifold sources, Latin as well as Arabic and Jewish, into one picture - at times incoherent, and proposed original readings of the text.

Similarly to Robert (A.7), Robertus Anglicus (A.10) and Adenulphus (A.11), Albert subscribed to the doctrine of the plurality of forms in dialectical syllogism.²⁷⁰ In his preliminary explanation of the subject-matter of the *Topics*, which was the *sylogismus dialecticus sive topicus*, Albert related the twofold adjectival qualification of this type of deduction to its formal and material principles. This syllogism, he stated, was characterized as *topicus*, since its inference was secured by the topics, while it was said *dialecticus* in virtue of its probable premises.²⁷¹ Similar to Robert (A.7), the *Doctor Universalis* adopted both the distinction between the simple and the *probans sive ad propositum* syllogism as well as the separation between the inventive and judicative parts of logic, although the Dominican justified this distinction by referring to its probable matter. Coherently, Albert identified autonomous criteria for testing the validity of the various species of syllogism. The validity of the simple

²⁶⁸ According to Brumberg-Chaumont ("Les divisions", p. 373), the commentary on the *Topics* was written before the commentary on the *Sophistical Refutations*, during the years 1267-1269, when Albert was travelling in Burtscheid, Esslingen and Strasbourg. Perhaps it is more likely that Albert accomplished his task of commentator in 1264ca, at the beginning of the three years he spent at the Dominican convent in Würzburg, from 1264 to 1267, as it has been supposed in the chronology of Albert's life and works, in the volume *Albertus Magnus und sein System der Wissenschaften. Schlüsseltexte in Übersetzung Lateinisch-Deutsch*, Münster: Aschendorff Verlag, 2011, p. 30.

²⁶⁹ "It has not been possible to identify the commentary Albert used for his *Topics*. It was hardly the one that is now commonly thought to be Kilwardby's (MS Firenze [sic] BNC C.4.1618)" (Ebbesen, "Albert (the Great?)", p. 93).

²⁷⁰ "Dialecticus formam habitudinis localis addit supra formam syllogismi simpliciter" (Albertus, *Topica*, 1.1.4, p. 245a). As remarked by Brumberg-Chaumont (*Les divisions*, p. 393), it is rather striking Green-Pedersen's claim that the doctrine of the plurality of forms "does not last long, and it is not even shared by all contemporary authors, for already Robert Kilwardby and Albertus Magnus state that there is only one form common to all syllogisms, viz. the figures and moods of the syllogism as such, described in the *Prior Analytics*" (*The Tradition*, p. 252).

²⁷¹ Albertus, *Topica*, 1.1.1, p. 234a; see also 1.1.5, p. 248a-b: "Syllogismus per habitudinem localem inductus [scil. the *locus differentiae*], per maximas locos confirmantes, ut 'de quocumque praedicatur [prima ed.] species et genus' et huiusmodi".

syllogism was evaluated on the basis of the syllogism's figure and mood. Even though the demonstration was a probative deduction, its formal validity was judged through the valid syllogistic schemes akin to the simple syllogism with which it shared the form, while the demonstration's material validity derived from the necessity of its premises. On the contrary, the validity of the other type of probative syllogism, namely the dialectical syllogism, depended on the probability of its premises, which were the material principles, and on the application of the suited topic, which was the *ratio inferendi* or formal principle of the deduction. Albert stated this explicitly in his analysis of fallacious syllogisms. Upon dealing with the formally contentious syllogism 'Every justice is good; every honesty is good; therefore, every honesty is justice', Albert affirmed that the viciousness of this reasoning did not lay in its being *inconcludens* – it was indeed an invalid second figure insofar as its premises were two universal affirmative propositions. Its invalidity was due to the use of an incorrect topical maxim, that is "if the same consequent follows from two antecedents, then one of the antecedent follows from the other".²⁷²

3.4.2 Dialectical syllogisms, said Albert, were produced starting *ex probabilibus et verisimilibus*. Albert used 'probable/probability' and 'truthlike(ness)' interchangeably, and this may be accounted for by supposing that he adopted the modal interpretation of probability found in the *Prior Analytics*, where Aristotle had defined probable propositions as *verisimilia* and in terms of contingency.²⁷³ In elucidating the notion of 'probability', Albert revealed an acute awareness of its complexity. Indeed he endeavored to clearly differentiate between probability's

²⁷² " 'Omnis iustitia est bona, omnis honestas est bona, ergo omnis honestas est iustitia'. *Habitudinem terminorum probantium non valet, quia non sequitur: 'si idem consequens sequitur ad duo antecedentia, quod unum istorum sequatur ad aliud'; et ideo peccat contra formam syllogismi ad propositum, quamvis in materia non peccet in aliquo*" (Albertus, *Topica*, 1.1.3, p. 243a); cf. also *supra* fn. 247 and Albert's commentary on the *Sophistical Refutations*, I.3.5 in Albertus Magnus, *Opera Omnia*, ed. by A. Borgnet, Paris: Vivès, 1890-1899 (38 vols), vol. 2, 1890, pp. 564-566. This issue has been extensively dealt with in J. Brumberg-Chaumont, "Les divisions", esp. pp. 384-409.

²⁷³ Aristotle, *Prior Analytics*, II.27, 70a3-5, in Barnes, *Complete Works*, vol. 1, p. 112; "Verisimile quidem est propositio probabilis; quod enim ut in pluribus sciunt sic factum vel non factum aut esse aut non esse" (*AL*, p. 137, 10-12). Albert exhibited a modal understanding of probability in many sections of the *Topics* where he said for example that the dialectical method "est ex contingentibus et probabilibus facere sive persuadere, quae appetimus persuadere" or that the proposition "solem esse maiorem terra acceptum per quantitatem diametri" is necessary and not probable "secundum quod necessarium et probabile opponuntur".

modal and objective sense on the one hand, and its epistemological-endoxical and subjective understanding on the other hand.

Objective probability described features of the world: “est autem probabile in contingentibus, quod secundum sui substantiam probabile est”. Albert offered a semantic and semiotic account of it, in which he explained that probability was the contingent mode of inherence of the predicate term in the subject. In probable propositions, claimed Albert, the predicate was not included (*inest*) *per se* in the subject nor the subject was *per se* in the predicate. But he was not explicit about the kind of *per se* predication he was referring to.

In the *Posterior Analytics*, Aristotle had defined three kinds of *per se* inherence, which were proper to the necessary propositions assumed as premises in demonstrative syllogisms. A thing belonged to another in itself (*per se*): 1) “both a) if it belongs to it in what it is [...] and also b) if the things it belongs to themselves belong in the account which makes clear what it is [...] and similarly in other cases too it is such things that I say belong to something in itself; and what belongs in neither ways I call accidental;” 2) “what is not said of some other underlying subject” that is “things which are not said of an underlying subject call things in themselves, and those which are said of an underlying subject I call accidentals”; 3) “what belongs to something because of itself belongs to it in itself, and what does not belong because of itself is accidental.”²⁷⁴

The second sense of *per se* concerned the mode of being rather than the mode of predication, thus it could be dismissed. The third sense of *per se* expressed the causal predication and the first sense denoted that the predicate expressed something included in the definition of the subject or that the subject was included in the predicate’s definition. We could suppose that Albert had in mind the first and third connotation of *per se* predication, which expressed some dispositions of the predicate to the subject and vice versa.²⁷⁵ Accordingly, ‘probability’ expressed the non-causal

²⁷⁴ Aristotle, *Posterior Analytics*, I.4, 73a35-b24 (Engl. tr. in Barnes, *Complete works*, vol. 1, pp. 118-119); cf. also Aristotle, *Metaphysics*, V.18, 1022a25-37.

²⁷⁵ In his commentary on the *Posterior Analytics*, Albert qualified the first sense of *per se* as the “dispositio entis unius ordinati ad alterum [...] ordine praedicandi et subjiciendi: et hoc dupliciter: si enim ordo est ingrediendi praedicatum in ratione subjecti, est modus primus [scil. 1a in corpore]: aut e converso, ita quod subjectum sit de quidditate praedicati, et sic est modus secundum [scil. 1b in corpore] [...] primi duo sic pertinent ad demonstrationem, quod cadunt in simpliciter scibilibus”

and non-essential relation between the subject and the predicate of a proposition. This implied that since the essential predication *per se* was omni-temporal, by contrast the accidental predication *verisimile* was contingent, namely it held for most of the times, but not always. This interpretation of the probable proposition – as that in which the predicate was not a cause of the subject nor was the subject the effect of the predicate – squared with the Albert's subsequent claim that in probable propositions the coherence between predicate and subject was neither necessary nor essential since it was not causal, but only probable. And being as such, this inherence or coherence was known through signs.²⁷⁶ Signs manifested the properties of a thing, without however showing its nature completely. And they were what was more intelligible *quoad nos*; thus, signs allowed men to have some insight into the essence and properties of a thing, when it was not possible to have direct access to its principles.

The objective probability, however, was not the *probabile* out of which came the premises of dialectical reasoning. They concerned the subjective or epistemological-endoxical probability (*secundum modum acceptionis*). According to this interpretation of the concept, probability did not express the essential contingency of beings but the imperfect knowledge of men. In semantic terms, this meant that the causal or essential relation of inherence of the predicate in the subject was not known as necessary, as it was, but only as probable by the cognitive subject, since he knew it through truthlike signs and not according to its causes, namely through probable premises and not true definition.²⁷⁷ For example, that the sun was larger than the earth was true and necessary in itself and it was acknowledged by ordinary people as well as by wise people, although in different ways. Only the astronomers indeed

(Albertus Magnus, *Liber I Poster. Analyticorum*, in Albertus Magnus, *Opera Omnia*, ed. by A. Borgnet, Paris: Vivès, 1890-1899 (38 vols), vol. 2, 1890, I.2.9, p. 46b.; hereafter, Albertus, *Post. An*).

²⁷⁶ "*Probabilia autem, ex quibus fit syllogismus dialecticus, sunt verisimilia. Dupliciter autem sunt verisimilia; aut enim in se sunt verisimilia, eo quod ipsa habitudo praedicati ad subiectum verisimilis est, eo quod nec praedicatum est in subiecto per se nec subiectum in praedicato per se nec utrumque in utroque; nec praedicatum necessariam et essentialem cohaerentiam habet cum subiecto, sed verisimilem <cohaerentiam> in signis, non in causis necessariis acceptam*" (1.3.2, p. 241b).

²⁷⁷ In commenting on Aristotle's statements about sign-inference in the *Prior Analytics*, Albert offered a twofold description of sign as "*quod, praeter speciem quam cognoscenti offert, ad aliquid ducit cuius est signum*" and "*communiter dictum, est omne illud quod ex sui specie, quam cognoscenti exhibet, aliud praetendit quod inferri potest ex ipso*" (Albertus Magnus, *Libri Priorum Analyticorum*, II.78, in *Id., Opera omnia*, vol. I, ed. by A. Borgnet: Paris, 1890, p. 803).

deemed the proposition to be a necessary truth, since they knew that the diameter of the sun was larger than the diameter of the earth. While for common people, who did not know the causes and judged it only through signs, the sun's major size was probable or verisimilar since the sun *appeared* to have the same size everywhere. Albert explained the Aristotelian definition of *probabilia* (ἐνδοξά), namely the probability or endoxality of propositions, as resulting from the interplay between the degrees of perfection of men's cognitive capacities,²⁷⁸ their acquired knowledge and the type of truthlikeness of the signs he used in reasoning. The different types of truth-like signs were indeed known through different human cognitive faculties.

1) Some truth-like signs were merely superficial and were not ground in the essence of things, thus they could be known sensibly by all people having normal sensory organs, particularly the five senses and memory, which enabled them to receive universals mixed with particulars. Since probable propositions of this type were grounded on signs that did not require any particular skill or competence in judging, but only non-disordered sensory perceptions, and since these were proper to (almost) all human beings, these types of endoxical propositions were widely accepted: by young and old, educated and *vulgares* men.²⁷⁹

2) Some truth-like signs were linked with the substantial, but not with the innermost nature of the subject; they were apprehended through the interaction of sense perception and intellect. Hence, propositions relying on such signs appeared to be truth-like not to all men, but to a majority of them (*pluribus*,) included the unlearned people.²⁸⁰

3) A minor number of truth-like signs were close to the essence and causes of things and farther from sense perception, thus they could be understood through the participation of rational apprehension. Consequently, propositions relying on these quasi-substantial signs were accepted only by intellectually gifted and educated men – the

²⁷⁸ In the 8th book of the *Topics*, Aristotle introduced the concept of "*bene natus*", namely the man who has a "*bonum ingenium*". There, he claimed that those men possessing "a certain natural ability to choose the true and shun the false" can easily pick out what is best "by a right liking or disliking for whatever is proposed to them" (*Top.*, VIII.14, 163b12-16). In commenting on these lines, Albert identified two influential components in determining the success or failure in grasping the first principles and reaching the highest knowledge, whose interplay accounted for a good or bad result. On the one hand, a set of physiological and environmental predisposing factors, on the other hand social and cultural factors.

²⁷⁹ Albertus, *Topica*, 1.1.2, p. 241b.

²⁸⁰ *Ibid.*

wise.²⁸¹ Subsequently, Albert explained the Aristotelian tripartition of experts' opinions in light of the degree of purity of truth-like signs. 3.1.) The propositions grounded on signs that were still partly grasped through sensorial perceptions were accepted by all the wise; while 3.2) those based on signs which were connected to the substantial nature of the subject, and which were therefore understood almost exclusively by the intellect, were known only by the most reputable wise men, and the experts in some arts. Finally, 3.3) propositions relying on truth-like signs, which pertained to the nature of the thing and were remote from sense perception, could be known only by men equipped with a "keen and exceptional understanding (*subtili et habundanti intellectu*)", which enabled them to have access to the first propositions and principles. And these most theoretical minded and learned (*probatis et probabilioribus*) were a small minority.

Albert's elucidation of epistemological-endoxical probability may be read as insinuating a subjective and objective epistemic hierarchy. On the one hand, his explanation of what is probable depicted the ascending ordering of human cognitive abilities and acquired skills, from sense perception universally shared by human kind, to the keenest intelligence peculiar to philosophers, properly actualized through (academic) intellectual training. On the other hand, Albert's account represented the ascending ordering of the objective intelligibility of reality as it was in itself. In climbing this pyramid, Albert proceeded from what is posterior in itself but is prior to us, namely that which is more readily intelligible for human beings since it falls under perception, to what is most intelligible in itself and less accessible to ordinary men, namely the first principles that regulate scientific understanding.

3.4.3 In his discussion of probability, Albert mentioned a *commentus Arabicus* as the source for an interpretation he had proposed therein. Having excluded the hypothesis that it could be one of Averroes' commentaries on the *Topics*, which remained unknown until the 16th century, scholars have not yet identified a suitable candidate.²⁸² It is commonly acknowledged that Albert was in debt, often heavily,

²⁸¹ *Ibid.*

²⁸² Averroes' commentaries on Aristotle's *Topics* were translated into Latin in the 20s of the 16th century by Abraham de Balme and Jacob Mantinus. For Albert's Arabic sources see Grignaschi, "*Les traductions*;" J. Janssen, "Albert le Grand".

to his Arabic sources for many of his logical views. This holds true particularly in the case of the *Isagoge*, the *Categories* and the *Posterior Analytics*, less for the *Sophistical Refutations* and even less for the *Topics*, despite some references to Avicenna.²⁸³ In considering Albert's acquaintance with Arabic writings, we could inquire whether the Dominican had any direct or indirect knowledge of Al-Fārābī's and Averroes' ideas about the topics of accident as a "general heuristic". Albert tackled the problem while commenting on Aristotle's assertion that it was not possible to obtain a unique universal dialectical method applicable to problems concerning any of the four dialectical predicables, "for this is not an easy thing to find, and, even were one found, it would be very obscure indeed, and of little service". The Dominican pointed out that according to one of the three senses of the polysemantic term 'method', the topics of accident constituted a common method (*universalis methodus*), the most general, sure and useful among the four particular methods pertaining to the four predicables. If, indeed, method was considered as the means for establishing whether a certain predicated was predicable of a certain subject (*quantum ad illud quod astruitur in ipsa*), then the topics of accident could be deemed to be a general method. Since it established the correct and faulty modes of essential predication (*astruitur in ipsa inesse*), it was presupposed by all the other particular types of predication: before analyzing whether a predicated inhered in the subject as its property or genus, it was necessary to ascertain preliminarily whether the predicate inhered in the subject or not. Similarly to Robert (A.7) and unlike the Arabs, Albert did not consider this method as universal in the sense that it could be applied to syllogistic in general. For him, indeed, the topics of accident was confined to the discovery of the middle term of dialectical syllogism, and could not play any role in the discovery of premises for the posited question, nor could it be employed

²⁸³ Cf. Ebbesen, "Albert (the Great?)", esp. p. 92; Grignaschi, "Les traductions;" J. Janssen, "Albert le Grand". Janssen raised the question about the unnamed commentators to whom Albert referred in his elucidation of *Topics* I.10 104a11 (Janssen, "Albert le Grand") pp. 255-256 and concluded that Albert's sources remained enigmatic. A parallel done with A.7, A.10, A.11, A.1 has revealed that the Dominican is the only author who mentioned Avicenna and, moreover, that none of these commentators expresses a view which is compatible with the *auctores* and the *quidam*, to whom the Dominican referred. A complete comparison with the 'existing' commentaries which date earlier or from the same period as Albert might unveil the names of these unnamed expositors. Or, in case of a negative result, it could stimulate further research dedicated to finding commentaries on the *Topics*, which Albert had at his elbow and that we do not yet know.

in producing demonstrative syllogisms. The topical method, indeed, permitted the invention of the appropriate sign, and not of the cause, which functioned as syllogisms' intermediate. The discovery of the proper middle term was made possible by the *locus differentia*, while the *locus maxima* - which was the principle of the syllogistic inference properly speaking - provided the correct way of disposing (*dispositio*) the middle and the extreme terms of the dialectical syllogism.²⁸⁴

3.4.4 Albert's descriptions of the topics, which were scattered throughout his paraphrases, recalled to mind the similar definitions found in the commentaries of Robert (A.7), Robertus Anglicus (A.10) and Adenulphus (A.11). However, in his claims that a *locus* is a *habitus rerum*, the *Doctor Universalis* did not mention the metaphysical foundations of such principles, which was instead a common feature of his predecessors. This substantial difference among the Dominican and the three Parisian masters can be fully perceived when paralleling Albert's exegesis of the beginning of the eighth book of the *Topics* with the elucidations elaborated upon by his peers (A.10, A.11). The Stagirite opened the last book of the *Topics* affirming that the philosopher and the dialectician proceeded alike in regards to finding the topics; and their common method of finding the topics was made even more explicit in the Latin translation, in which commentators read that "*donec inveniatur locum similiter philosophi et dialectici consideratio*".²⁸⁵ Normally, commentators elucidated this passage by saying that the philosopher, or metaphysician, dealt with the substance of the topics, namely in relation to the things (*res*) and considered the causes of the relations among things. And the dialectician considered the topics only *secundum intentionem*, namely he was concerned with the topical relation between general concepts such as genus and species, cause and definition. Accordingly, the discoverer of the topical relation was the metaphysician, from whom the dialectician derived the topics. And it was in virtue of this metaphysical ground that the dialectical topics were necessary, and could therefore accomplish their function as warrants of the syllogistic inference. In Albert we hardly find any claim concerning

²⁸⁴ Albertus, *Topica*, 2.1.3, p. 297b.

²⁸⁵ Aristotle, *Topics*, VIII.1, 155b9-10 (AL, p. 156, 7-9).

the derivation of the dialectical topics from the demonstrative topics.²⁸⁶ In his short paraphrase of the opening lines of book 8, the Dominican explained the affinity between the dialectician and the demonstrator in light of their identical mental procedure for discovering syllogisms' middle terms. Both indeed found the proper intermediate through an internal inquiry which was led by them alone and which did not involve other people: "*uterque negotiatur circa medium inveniendum et ordinem proponendorum apud se ipsum [...] quaerit apud se ipsum dialecticus et non requirit alterius consensum*".²⁸⁷ The reference to this mental discourse provides us with a clue for unveiling the deep reason underlying the diverse exegeses of the Aristotelian text elaborated upon by these commentators: the author's different opinions about logic in general. Robert (A.7), Robertus Anglicus (A.10) and Adenulphus (A.11) considered logic a *scientia sermocinalis* dealing with a specific type of *sermo*, namely the syllogism. Albert explicitly refused the view of those who "*dicunt logicae generalis subiectum esse sermonem, prout est designativum rerum, quae significantur per ipsum*", since from this standpoint logic focused primarily on language, specifically on the "*sermo exterius prolatus*". And this type of language (*sermo*) was not significant in itself, as Avicenna had pointed out, but only insofar as it signified the mental concepts, namely the mental language (*sermo interius in mente dispositum*). Therefore, stated Albert, logic dealt with the external language only secondarily insofar as it signified mental concepts.²⁸⁸ According to the *Doctor Universalis*, the principal subject of logic was instead the *argumentatio* insofar as it was the instrument through which men acquired knowledge starting from what is known. And logic, which guided the intellect in its move from what is known to what is unknown, was a rational science concerned mainly with mental concepts and acts considered in themselves

²⁸⁶ Albert did not admit such conflation of logic and metaphysics; in the prologue of his commentary on the *Posterior Analytics*, he stated the distance between them: "*Demonstratio et scientia demonstrativa consideranda est hic per differentias sermonum et non per rerum differentias; logica enim non res, sed intentiones rerum considerat, ut universale, particulare, orationem, argumentationem*" (1.1.1, Albertus, *Post. An.*, p. 2b).

²⁸⁷ Albertus, *Topica*, 8.1.1, p. 492a-b.

²⁸⁸ Albertus Magnus, *Super Porphyrium de V Universalibus*, in *Opera Omnia. Editio Coloniensis*, vol. I.1a, ed. by M. Santos Moya, Münster: Aschendorff, 2004, I.4, p. 5.

Cum logici intentio sit docere ea, per quae per se venit in notitiam ignoti per id quod notum est, logici subiectum est argumentatio [...] notum, per quod scientia ignoti accipitur, dupliciter consideratur, scilicet prout est res extra animam noscentis accepta et prout notio quaedam est in anima noscentis. Non autem facit notitiam ignoti, prout est res extra animam noscentis accepta, sed potius prout notio rei est in anima noscentis existens. Sic enim significativa et illuminativa eius, quod ignotum est, quod in notitia ipsius aliquo modo percipit intellectus perfecta comprehensione. Hoc igitur modo voces significativas rerum considerat logicus et non aliter.²⁸⁹

This turn from a *sermocinalis* to a *rationalis* logic and the enlargement of its subject-matter from syllogism to argumentation, which comprehended also induction, enthymeme and example, enabled Albert to flank the 'standard' version of the *Organon* with the Arabic 'long *Organon*' in some of his writings.²⁹⁰ A mark of this was left also in Albert's discussion of the first dialectical instrument, namely the collection of premises for producing dialectical syllogisms. Habitually, commentators used Aristotle's description of logical premises as a starting point for discussing the relation between logic and the arts of the *trivium*.²⁹¹ In paraphrasing this passage, Albert departed from his predecessors and replaced the traditional *trivium* with Gundissalinus' *quadrivium*: logic, taken in its general sense, embraced the trivial arts and, moreover, poetics which, said Albert, Aristotle had deemed to be a special science. In its proper or narrower meaning, then, logic coincided with the science concerned with the various types of syllogisms, namely the demonstrative, dialectical and sophistical.²⁹²

3.5 Logical form and logical matters: the *descensus* of the form into the matters.

The theory of the plurality of forms was rivalled by the theory of the unique form shared by the various species of syllogism, which was upheld by Robertus de

²⁸⁹ *Ibid.*

²⁹⁰ On this topic see the detailed article of Brumber-Chaumont ("Les divisions"), which rectifies some conclusions of Marmo (in "Suspicio").

²⁹¹ Aristotle, *Topics*, I.14, 105b20-25.

²⁹² Albertus, *Topica*, p. 278b.

Cilnacobi (A.1), Elias (A.14) and the anonymous commentator A.9, whose commentaries on the *Topics* seem to have been produced in Paris.²⁹³

When comparing the commentaries analysed so far (A.2, A.7, A.10, A.11) with Robertus' (A.1), Elias' (A.14) and A.9's works, the difference in length, accuracy and depth between these exegeses becomes immediately evident. The commentaries written by the advocates of the unity of syllogistic form are much less elaborate and they never examine in depth any of the issues raised. The authors seem to be content with short, at times trivial, answers to standardized sets of questions. None of the three authors expanded upon logic in general, Elias and A.9 merely repeated the Boethian definition of logic as the *ratio disserendi* divided into an inventive and a judicative part. And Robertus de Cilnacobi (A.1) incidentally qualified logic as *scientia rationalis*.²⁹⁴ All three agreed that logic was arranged according to the varieties of syllogisms (*penes diversitatem sillogismi*) and that dialectic dealt with dialectical syllogism and the *Topics*. In their hylomorphic accounts of syllogism, these authors admitted neither the plurality of forms nor the differentiation between the inferring and the probative syllogism. It is worth pointing out that none of them mentioned as an alternative to their own views either the doctrine of the plurality of forms nor the division of syllogism into inferring and probative. Unlike the 'pluralists', Robertus de Cilnacobi (A.1), the anonymous A.9 and Elias (A.14) did not apply the doctrine of the four causes in their exegeses of the definition of syllogism that opened the *Topics*. They explained it through the principle of the descent

²⁹³ According to Green-Pedersen the author of A.1 commented on all the books of the *Topics* in Paris around the 1240s. The attribution of A.1 to Robert Kilwardby is not sure. As pointed out by Green-Pedersen and Weijers, the conciseness of this commentary in form of *lectiones* makes difficult a doctrinal comparison with Kilwardby's works, such as the commentary on the *Prior Analytics* and the *De ortu scientiarum*. I paralleled A.1's and Kilwardby's explanation of the definition of syllogism found in Kilwardby's commentary on the *Prior Analytics*, but I found few points of doctrinal and terminological contact. A.9 is a fragmentary *lectio*-form commentary, which stops at I.3, 101b.10, Green-Pedersen dates it to the 1250. Elias' *Sententia libri Topicorum* (A.14) is a short *sententia*-commentary covering all the eight books of the *Topics*, whose prologue was taken from the commentary on the *Prior Analytics* of Robert Kilwardby. Probably it was produced in Paris, around the 1275-80 according to Green-Pedersen. For the different dates see Green-Pedersen, *The tradition*, respectively p. 382, p. 386, p. 389.

²⁹⁴ A.1, f. 95b (see Weijers, "Le commentaire", p.127); A.9, f. 155va; A.14, f. 56ra. Robertus (A.1) acknowledged that in its general sense, logic subsumed the *trivium*, while in its proper meaning, logic was the science concerned with the *Organon*: "logicus communiter sumendo ipsum continet sub se totum trivium proprie autem sumendo non" (A.1, f. 102a).

(*descensus*) of the unique form into the matter, which had a more Neoplatonic than Aristotelian flavour, and implied the interpretation of the Aristotelian differentiation of syllogism as an analogical division. According to this elucidation, the undifferentiated simple syllogistic form, which was described in the *Prior Analytics*, descended directly and completely into the demonstrative syllogism, which was the perfect syllogism insofar as it preserved both the necessity of consequence and of the consequent. Subsequently, the simple syllogism's form degraded into imperfect types, firstly into the dialectical syllogism, which maintained the *necessitas consequentiae* but had mere probable premises and conclusion, and finally into the sophistical syllogism which did not preserve any necessity.²⁹⁵ From this unitary perspective, the variety of matters accounted for the differentiation between syllogisms: "syllogismi distinguuntur penes materialia ex quibus sunt", claimed the anonymous commentator A.9. The three authors could avoid the possible objection that a form should inform only the matter suited to it, by acknowledging a plurality of matters. The syllogism's appropriate matter was the essential matter, which consisted of the terms and premises of syllogism and was identical in all syllogisms: if it was vicious, there would not have been any syllogism. By admitting such essential matter, these commentators could also solve the puzzle about fallacious deductions. Materially sophistical syllogisms were syllogisms in virtue of their *materia essentialis*, even though they were faulty in probable matter, which was a merely accidental matter. The various species of deduction shared the essential matter and differed for their accidental matters, which were probable propositions for fallacious and dialectical syllogism, necessary propositions for demonstrative deductions.²⁹⁶ From the few words these three authors spent on the accidental matter, it seemed that the Elias and the anonymous commentator A.9

²⁹⁵ A.1, f. 95a-b (Weijers, "Le commentaire", p.126); A.14, f. 56ra and A.9, f. 158ra-rb ("syllogismus potest tripliciter considerari aut in comparatione ad conclusionem quam infert, aut in comparatione ad animam cui facit fidem aut in comparatione ad materialia ex quibus est. Si comparetur ad conclusionem quam infert, sic dicitur ratiocinatio, unde Algazel formacio est descensus causae in causatum"). In the prologues to his commentaries on the *Topics* (and also on the *Posterior Analytics*), Albert the Great had interpreted the division of syllogisms as a descending degradation from the perfect, the demonstration, to the imperfect form, fallacy, without however assigning any active role to this distinguishing principle in the rest of the work.

²⁹⁶ A.1, f. 97a (Weijers, "Le commentaire", pp.132-133); A.9, f. 159va; A.14, f. 57ra.

considered necessity and probability both objectively, in terms of modality,²⁹⁷ and subjectively (*ex parte nostra*) or cognitively. Robertus de Cilnacobi (A.1) agreed with them in proposing a gnoseological reading of the definition of *probabilia* (ἐνδοξα), according to which probability reflected three cognitive human powers:

Tres conditiones principales positae in ratione probabilis respiciunt tres gradus virtutis cognoscitivae in nobis: primus est sensus coniunctus cum fantasia, et hac coniunctione utuntur omnes. Secundus gradus est virtus cogitativa vel estimativa, qua plures utuntur. Tercius est virtus intellectiva, qua habundant sapientes [...] quidam [*scil.* sapientes] enim utuntur intellectu debili modo parum profundantes intellectum, alii autem modo mediocri, alii autem modo optimo et perfecto.²⁹⁸

One of the main consequences of the dismissal of the dialectical form was the decreased importance of the *loci*. Although they were still considered the principle of dialectical syllogism, they did not have any theoretical or active function in relation to dialectical syllogism. Neither as warrants, since the dialectic inference was secured by moods and figures exclusively. Nor as criteria for the validity of dialectical deductions, since the validity of all syllogisms was evaluated on the basis of valid syllogistic schemes. The mere symbolic role assigned to the *loci* by Robertus de Cilnacobi (A.1), the anonymous A.9 and Elias emerged from their opinions on the subjects treated in the various books of the *Topics*. Similarly to Adenulphus, these masters deemed the first book to be treating general principles of syllogism, and the central books (2-7) to be concerned not with the formal principles of syllogism, but with dialectical syllogism itself insofar as it applied to problems related to the four predicables. The eighth book dealt with the use of syllogisms in training and testing discussions.²⁹⁹

²⁹⁷ A.9, f. 158va: "Omnis sillogismus est aut ex hiis quae sunt et non possunt non esse, et sic est sillogismus demonstrativus, aut est ex hiis quae nec sunt nec possunt esse et sic est parallogismus disciplinae, aut est ex hiis quae possunt esse et non esse. Et tunc dupliciter, aut enim magis se habet ad esse quam ad non esse, et sic est sillogismus dyalecticus, aut magis se habet ad non esse quam ad esse et sic est sillogismus litigiosus". Cf. A.14, f. 56rb.

²⁹⁸ A.1, f. 96b (Weijers, "Le commentaire", p.132); A.9, f. 158va; A.14, f. 56rb.

²⁹⁹ A.1, f. 97b (Weijers, "Le commentaire", p. 135) and 105a; A.14, f. 81ra.

The elimination of the dialectical form obviously had repercussions for the way these authors considered the division of logic into discovery and judgement. Similarly to the 'pluralists', the advocates of the unique form affirmed that the *ars iudicandi* was taught in the *Prior* and *Posterior Analytics* and the *ars inveniendi* in the *Topics* and *Sophistical Refutations*. Unlike them, however, Robertus de Cilnacobi (A.1), Elias and the anonymous A.9 did not conceive these two parts of logic as completely separated, but in continuity. Or, in other words, in all the parts of logic there was both a specific discovery and a peculiar invention but at different degrees – e.g. in the *Topics* the discovery of the dialectical middle term was preeminent over judgment; and on the contrary in the *Posterior Analytics* the discovery of the demonstrative middle term, namely the definition, was less preponderant than judgment. The three commentators arrived at an acknowledgement of an inventive and a judicative part to each of the disciplines falling under the general logic by equating the pair discovery-invention to the couple *ars/utens-docens/scientia*. Robertus (A.1), Elias and A.9 considered indeed *inventio* as equivalent to *ars*, which concerned the production (*fieri*) and operated through rules, and *iudicium* as equal to *scientia*, which studied the properties of its subject-matter. Thus, they raised the question whether a logical discipline, such as dialectic or demonstrative, was inventive (an *ars*), or judicative (a *scientia*). As regard to dialectic, they answered that it was *docens* or *iudicativa*, insofar as it treated dialectical syllogism *per modum scientiae*, and it was also *utens* or *inventiva* since it operated *per modum artis* on the dialectical problem, that is the *quaestio*.³⁰⁰

Conclusion

This overview of the earliest existing commentaries on the *Topics*, with a special emphasis on the first book and sections of the second and eighth books, has revealed some of the points of contact and divergence between the earlier commentators. All of them interpreted syllogism from the hylo-morphic perspective. Generally

³⁰⁰ A.1, f. 95a (Weijers, "Le commentaire", pp. 124-125); A.9, f. 156rb-va; A.14; f. 57ra.

speaking, usually these authors had a twofold understanding of the concept of 'probability'. They offered a modal and objective account of 'probability' in their elucidation of the material differentiation of syllogisms introduced in the opening lines of the *Topics*. And they opted for a subjective and epistemological understanding of the notion of 'probability' in their exegeses of the Aristotelian *probabilia* (ἐνδοξα).

Even though it was not possible to precisely determine the direct dependence of a commentator on another, since "between any two medieval logicians there is another logician",³⁰¹ it has however been possible to identify some *Familienähnlichkeit* between those authors who advocated the plurality of syllogistic forms on the one hand, and the upholders of the unique syllogistic form on the other hand.

The commentators who admitted the formal identity of syllogisms, such as Robertus de Cilnacobi (A.1), Elias (A.14) and the anonymous A.9, did not explain the Aristotelian definition of syllogism, found in the first chapter of the *Topics*, in the light of the doctrine of causes, which was instead adopted by all the pluralists, except Albert the Great. They assumed instead the differentiating principle of the *descensus* of the unique form into the various matters, which in the case of dialectical and sophistical syllogism implied a degradation of the form itself. These masters did not admit of any substantial differentiation between syllogisms. They refused not only to acknowledge a special form proper to dialectical syllogisms, but also to distinguish between the inferring and the probative syllogism. The theory of the unity of forms had consequences on the role acknowledged to the *loci* - which did not find any room in this unitarist account, and also on the interpretation of the division between the inventive and the judicative parts of logic - which were considered to be common features of all the subparts of logic.

While the adherents to the doctrine of the unique form seemed to closely follow Aristotle, the advocates of the plurality of forms were considerably influenced by Boethius' epistemological reading of syllogisms and arguments. As a

³⁰¹ N. Kretzmann, "Incipit/Desinit", in P. Machamer - R. Turnbull, *Motion and Time, Space and Matter: Interrelations in the History of Philosophy and Science*, Columbus: Ohio State University Press, 1976, pp. 101-36, here p. 108.

consequence, all the pluralists assumed the division of syllogism into an inferring and a probative one, and an instantiation of the latter was dialectical syllogism. Accordingly, they admitted a specific form for dialectical deductions, whose principle of inference were the dialectical topics.³⁰² At the same time, dialectical syllogisms were based on the *loci*, the simple syllogism and the demonstration, which shared the same 'logical' form, grounded on the valid syllogistic schemes. In authors such as Robert (A.7) and Albert the Great the distinction between logical and dialectical forms and matters was carried to the extreme. Through the differentiation between logical and dialectical forms, these commentators tied the notion of logical validity to the simple (logical, we may say) form, and the notion of dialectical validity to the dialectical form. This discrimination, in turn, formed the basis for separating not only discovery and judgement, but also between the logical and dialectical (or non-logical) features of syllogisms and reasoning in general. By grounding the material validity of dialectical reasoning on the evidentness of the premises, the distance between logic and dialectic was broadened further. Consequently, within the boundaries of dialectic some types of reasoning which were on the margin of logical theories, such as induction and, secondarily, enthymeme and example could find a place in their own right. While 'logical' induction needed to be resolved into the categorical syllogism, the dialectical induction was put on an equal footing with dialectical syllogism.

The distinction between logical and dialectical form and, more generally, between the logical and dialectical facets of reasoning did not amount to the material-formal distinction between inferences, but rather to a demarcation between a formal and an epistemological understanding of logic. In those authors who were markedly influenced by Boethius, logic, or better dialectic, inclined towards psychologism: indeed dialectical *ratiocinationes* did not aim at inferring necessarily the conclusion, by at producing beliefs about it.

³⁰² By assigning a funding role to the *loci*, the doctrine of the double form was the heir of the Boethian tradition of the topics. But while Abelard as well as 12th and early 13th century authors had assigned a function to the topics in validating enthymematic inferences, the Aristotelian commentators had to struggle in assigning a validating role to the topics in syllogistic deductions.

Chapter Four. Semantic topics: the Modistic mode of commenting on the *Topics*.

4.1 The influence of new conceptions and paradigms of logic on commentators of the *Topics*.

4.1.1 In his commentaries on the *Organon*, Albert the Great embraced the Avicennian notion of logic, according to which science dealt with mental concepts namely with second intentions applied to primary intentions, and he introduced diverse divisions of logic and of the books of the *Organon*, both in its 'standard' and Arabic 'long' version. The models proposed by Albert influenced the arrangement of logic proposed by Thomas Aquinas in the prologue of his commentary on the *Posterior Analytics* (1270-72ca).³⁰³ Thomas qualified logic as a rational science (*scientia rationalis*) concerned with the study of beings of reason (*entia rationis*) that were produced by the threefold intellect's activity, namely apprehension, judgement and ratiocination.³⁰⁴ Accordingly, Thomas subdivided logic on the basis of these three acts of the mind (*secundum diversitatem actuum rationis*), hence associating each being of reason to a part of logic and to the books of the 'long' *Organon*. First, Aquinas connected simple apprehension, through which the intellect knew the essence of things, to the doctrine of the *Categories*. Secondly, he matched predication and judgment to the *On interpretation*. Thirdly, he deemed the books of the *logica nova* to parallel the proper act of the *ratio*, which consisted in "discurrere ab uno in aliud, ut per id quod est notum deveniat in cognitionem ignoti". Aquinas articulated this third part of logic in three subparts whose features stemmed from the interplay of two principles. On the one hand, Aquinas considered the parallel between nature's

³⁰³ On Albert's divisions of logic see Marmo, "Suspicio", esp. pp. 159-163 and 165-169; Brumberg-Chaumont, "Les divisions"; on Aquinas' division of logic see R. W. Schmidt, *The Domain of Logic According to Saint Thomas Aquinas*, Martinus Nijhoff: The Hague, 1966.

³⁰⁴ Logic is the art "quae [es]t directiva ipsius actus rationis, per quam scilicet homo in ipso actu rationis ordinate, faciliter et sine errore procedat. Et haec ars est logica, idest rationalis scientia. Quae non solum rationalis est ex hoc, quod est secundum rationem (quod est omnibus artibus commune); sed etiam ex hoc, quod est circa ipsum actum rationis sicut circa propriam materiam" (T. Aquinas, *Expositio libri Posteriorum*, in S. Thomae de Aquino, *Opera omnia*, ed. Commissio Leonina, Romae 1989, vol. I*, p. 6); Schmidt, *The Domain*, pp. 52-57.

and reason's acts: nature as well as art achieved their scopes by necessity, *ut in pluribus* or they could produce a faulty effect. On the other hand, Thomas took into account the types of cognitive effects produced by the mind's activity in the agent: I) some reasoning led to necessary conclusions and engendered *certitudo* in the reasoner; II) others led to true conclusions only most of time and produced various beliefs that were comprehended within the graded classification: *opinio*, *suspicio* and *estimatio*; III) some reasoning was defective and corresponded to the sophistical reasoning treated in the *Sophistical Refutations*. Aquinas accommodated this threefold division of the partition of logic into discovery and judgment. The judicative (or *analytica sive resolutoria*) part dealt with type I) reasoning, namely those argumentations engendering knowledge and *certitudo* such as the simple syllogism described in the *Prior Analytics* and the demonstrative syllogism treated in the *Posterior Analytics*. The inventive part of logic concerned type II) reasoning, and Aquinas divided it according to the types of the cognitive habits they begot:

Secundo autem rationis processui deservit alia pars logicae, quae dicitur inventiva. Nam inventio non semper est cum certitudine. Unde de his, quae inventa sunt, iudicium requiritur, ad hoc quod certitudo habeatur. Sicut autem in rebus naturalibus, in his quae ut in pluribus agunt, gradus quidam attenditur (quia quanto virtus naturae est fortior, tanto rarius deficit a suo effectu), ita et in processu rationis, qui non est cum omnimoda certitudine, gradus aliquis invenitur, secundum quod magis et minus ad perfectam certitudinem acceditur. Per huiusmodi enim processum, quandoque quidem, etsi non fiat scientia, fit tamen *fides vel opinio propter probabilitatem propositionum, ex quibus proceditur*: quia *ratio totaliter declinat in unam partem contradictionis, licet cum formidine alterius, et ad hoc ordinatur topica sive dialectica*. Nam syllogismus dialecticus ex probabilibus est, de quo agit Aristoteles in libro *Topicorum*. Quandoque vero, non fit complete fides vel opinio, sed suspicio quaedam, quia non totaliter declinat ad unam partem contradictionis, licet magis inclinetur in hanc quam in illam. Et ad hoc ordinatur *Rhetorica*. Quandoque vero sola existimatio declinat in aliquam partem contradictionis propter aliquam repraesentationem, ad modum quo fit homini abominatio alicuius cibi, si repraesentetur ei sub similitudine alicuius

abominabilis. Et ad hoc ordinatur *Poetica*; nam poetae est inducere ad aliquod virtuosum per aliquam decentem repraesentationem.³⁰⁵

Eventually, Aquinas' model revealed itself to be largely adopted by next generation of authors and did not have negligible consequences in the subsequent speculations about logic and its inner articulation. Thomas' scheme introduced a shift in the partition of logic from its 'objective' to its 'subjective' elements, from syllogism and its components to the mental acts that produced the beings of reason (*entia rationis*) and to the habits which accompanied them. This change of perspective allowed for the making of room for rhetoric and poetic within the inventive part of logic aside from dialectic, thus introducing a significant reshaping of the ancient arrangement of the sermocinal disciplines of the *trivium*.

The spread of Avicenna's opinions on the "intentionalistic logic"³⁰⁶ along with Aquinas' new paradigm for distinguishing the parts of logic *secundum diversitatem actuum rationis* played a key role in the transformation that logic and its subject matter underwent in the sense of intentional science (*scientia rationalis*) from the 1270s.

4.1.2 A testimony of this modification is provided by Angelus de Camerino, who in his commentary on the *Topics* dating from the end of the 13th century, proposed a rather elaborate doctrine of second intentions.³⁰⁷ He committed himself to the view

³⁰⁵ Aquinas, *Expositio*, bk. 1, l.1, pp. 6-7.

³⁰⁶ As remarked by Green-Pedersen, in Boethius of Dacia's commentary on the *Topics* the term "second intentions" did not appear, whilst it was present in Simon of Faversham's commentary (Green-Pedersen, *The Tradition*, p. 233). On the different ways of understanding and subdividing the *intentiones* in the 13th-14th centuries see J. Pinborg, "Radulphus Brito's sophism on second intentions", in *Vivarium* 12 (1975), pp. 119-152; G. Klima, "The Changing Role of *Entia Rationis* in Mediaeval Semantics and Ontology", in *Synthese* 96/1 (1993), pp. 25-59; L.M. de Rijk, *Giraldus Odonis OFM, Opera philosophica, vol. II: De intentionibus. Critical edition with a study on the medieval intentionality debate up to ca. 1350*, Leiden: Brill, 2005.

³⁰⁷ Angelus de Camerino (d. 1314 ca.) belonged to the Heremits of St. Augustine, in 1295 became the regent master of Theology for the Augustinians at Paris and taught in Rome, was named bishop of Cagli on December 1296, in 1298 was named bishop of Fiesole and in 1301 bishop of Larino, then of Modon (1303) and in 1311 became Patriarch of Grado. The outcome of his teaching activity were commentaries on the *logica vetus* (*Isagoge*, *Categories*, *Perihermeneias*) and on the *Topics*. In the dedicatory letter, which is appended to some manuscripts of Angelus' commentary on the *Topics* and is addressed to Andriolus, a brother of his, Angelus claimed that he wrote his commentary on the *Topics* while he was lecturing on the *Metaphysics*, at the request of their young student, probably the novices (*nostrorum studentium iuniorum*). In his commentary, Angelus showed a peculiar taste for

that logic was a rational science centred around second intentions namely high-level concepts or rules drawn from the first intentions:

Secunda intentio non est aliud nisi secundus conceptus quem intellectus sibi format de re cui immediate non res, sed conceptus primus respondit. Sic enim debemus imaginari quod intellectus intelligit hominis vel alterius ordinate et distincte quidditatem, quam quidditatem sic apprehensam appellat hominem vel ut melius dicatur humanitatem. Et tale nomen vocatur nomen primae intentionis. Sed intellectus ex tali ordine partium quidditatis ipsam quidditatem representante format sibi quemdam secundum conceptum cum non quidditas rei immediate.³⁰⁸

Angelus subdivided logic on the basis of Aquinas' threefold acts of mind, which he accommodated to Al-Farabi's criterion of the intellect's ways of erring, which was used around the mid-13th century. Angelus then divided the *logica nova* on the basis of simple syllogisms' material differences. Dialectic and the *Topics* were concerned

etymology and borrowed etymological explanations of Greek words such as *topos* or *method* from Hugh of Pisa's (*Ugucio*) *Liber derivationum* and Papias' *Elementarium doctrinae*. Angelus commentary in sentence-form is preserved in seven manuscripts and it may have enjoyed a rather wide circulation: only two manuscripts are nowadays in Italian libraries, at Rome and Florence, while four are preserved in libraries of Central and Eastern Europe, namely Erfurt, Prague, and two copies in Cracow. As is known, the universities of these cities were influenced by nominalist ideas. That Angelus commentary may have been considered interesting by nominalist authors is confirmed by the ownership note of the Vatican copy, which came from Marsilius of Inghen's library: "Expositio thopicorum pro libraria universitatis per me Marsilium de Inghen propria manu" (Città del Vaticano, Biblioteca Apostolica Vaticana, Pal. Lat. 1057, ff. 1ra-198vb, here f. 1; I will refer to this manuscript). Moreover, Angelus is mentioned in an anonymous 15th century commentary (A.46) and excerpts of his commentary were added to the margins of the Cesena manuscript, which contains Adenulphus de Anagni's commentary (cf. *supra* ch. 3.3). On Angelus see D. Perini, *Bibliographia Augustiniana, Scriptores Itali*, Firenze 1929, vol. I, p. 173; O. Weijers, *Le travail intellectuel à la Faculté des arts de Paris: textes et maîtres (ca. 1200-1500), I, Répertoire des noms commençant par A-B*, Turnhout: Brepols, 1994, p. 63; D. Walz, *Die historische und philosophischen Handschriften der Codices Palatini Latini in der Vatikanischen Bibliothek (Cod. Pal. Lat. 921-1078)*, Wiesbaden: Dr. Ludwig Reichert Verlag, 1999, p. 229. On the commentary on the *Topics* see Green-Pedersen, p. 390, A.17.

³⁰⁸ A.17, f. 3va; see also: "Logica ergo sola considerat huiusmodi conceptus ut sunt ex primis conceptis formati, et istud est quod Avicenna dicere voluit quod <logica> est de secundis conceptibus adiunctis primis idest formati ex primis. Et quia sunt formati ex primis sicut carpentarius format regulam aliquando ex aliquo ligno recto et sine obliquitate per quam postea alia ligna dirigere valet, ideo secundi conceptus, licet sint formati ex primis, sunt tamen regulae quaedam ad cognoscendum res quae in primis conceptibus immediate cognoscuntur" (A.17, f. 1ra-rb).

with the dialectical or topical syllogism, which was a second intention whose principles were dialectical topics and which applied to probable matter.³⁰⁹

These newly introduced paradigms gained prominence in the following decades, nevertheless the old alternatives were not completely replaced, as attested to by one of the outstanding modistic logicians, Radulphus Brito who, at the edge of 13th century, wrote that “aliqui dicunt quod ens rationis est subiectum in logica, alii quod syllogismus, alii quod modus sciendi”.³¹⁰

4.1.3 In the prologue to his *Quaestiones supra Topica*, Radulphus Brito offered a picture of the most widely adopted dividing principles underlying the alternative paradigms of logic, which were adopted in his time. “Secundum antiquam viam et considerationem”, which was followed by many mid-13th century Parisian masters of Arts, logic was divided “secundum divisionem sillogismi”: the remote and proximal integral parts of syllogisms were dealt with in the *logica vetus*, namely the *Categoriae* and the *De Interpretatione*, whilst the subjective parts in the *logica nova*.

³⁰⁹A.17, f. 3rb-vb: “Subiectum huius libri non est sillogismus dialecticus in quantum huiusmodi, sed in quantum est quaedam intentio secunda; est quaedam intentio formata ex quodam discursu primi intellectus circa rerum probabilitatem vel qualitercumque velis hanc secundam intentionem describere vel exprimere”.

³¹⁰ R. Brito, *Quaestiones super Porphyrium*, q. 3, in S. Ebbesen – J. Pinborg, “Bartholomew of Bruges and his Sophisma on the Nature of Logic”, in *Chaiers de l’Institut du Moyen-Âge Grec et Latin* 39 (1981), pp. iii-80, here p. xv. Bartholomew’s sophism offers a valuable testimony about the discussion on the manifold views endorsed by 13th century authors – such as Albert the Great, Boethius of Dacia and Radulphus Brito – about logic, its epistemic statute and its subject-matter, along with the criticism raised against these opinions. Radulphus Brito (1270-1320ca). studied in Paris, where he became master of Arts before 1296; he continued teaching while studying theology (from 1299ca.), and obtained his degree in theology around 1308. He then became administrative head (*provisor*) of the Parisian University between 1315 and 1320. Brito was a prolific and all-round author. His writings span from mathematics to theology and grammar, he commented on Aristotle’s natural philosophy, metaphysics and ethics, and on the ‘standard’ *Organon*, along with Boethius’ *De topicis differentiis*. His logical commentaries were read by generation of scholars; particularly, his commentary on Aristotle’s *Topics*, which was written before 1295, was still used by Prague and Cracow Arts masters at the turn of the 14th century (see *infra*, ch. 7.5). On Brito’s *Quaestiones supra Topica Aristotelis*, which is preserved in nine manuscripts, see Pinborg, “Die Logik”, pp. 82-86, which provides a list of the questions (reprinted in Deuffic, “Un logicien”, pp. 69-73); Green-Pedersen, *The Tradition*, p. 392, A.20. I will use the manuscript preserved at Paris, Bibliothèque Nationale de France, ms. Lat. 11132, ff. 1ra-52ra, written in 1307 and available on line on Gallica: <http://gallica.bnf.fr/ark:/12148/btv1b90767186?rk=42918;4%C3%B9>. On Brito see S. Ebbesen, “Radulphus Brito. The Last of the Great Arts Masters. Or: Philosophy and Freedom”, in Aertsen – Speer, *Geistesleben*, pp. 231-251; J.-L. Deuffic, “Un logicien renommé, proviseur de Sorbonne au XIV^e s. Raoul le Breton de Ploudiry. Notes bio-biographiques”, in *Pecia: ressources en médiévistique* 1 (2002), pp. 45-154; W.J. Courtenay, “Radulphus Brito, master of arts and theology”, in *Chaiers de l’Institut du Moyen-Âge Grec et Latin* 76 (2005), pp. 131-158.

Brito seemed more inclined towards the new view, according to which the *logica utens* centred around the various *modi sciendi* – *definitive, demonstrative, divisive et topice* – and aimed at providing itself and the other sciences with the proper tools for producing knowledge. These *instrumenta*, such as syllogism, induction, and definition, were intellectual entities and as such were the objects of the study of the *logica docens*. Teaching logic, indeed, dealt with beings of reason (*entia rationis*) or second intentions, namely with logical concepts that resulted from three mental acts, apprehension, judgment and reasoning. According to the new way, logic was organized on the basis of these threefold operations of reason and the ‘standard *Organon*’ was divided *secundum diversitatem actuum rationis*, similarly to Aquinas. The adherents of the new view, however, did not side with him in separating the parts of the *logica nova* according to the graded classification of beliefs. Indeed Thomas’ modern followers opted for the old division based on the material differences between syllogisms (*penes divisionem syllogismi*).³¹¹ Even though Brito did not mention any of the advocates of the modern way, they could be identified with his fellow *Modistae*. The turn toward intentionalism was indeed a basic tenet of the views about logic and its subject matter which were endorsed by the group of authors active in Paris from the 1270s to the turn of the century and known as *Modistae*,³¹² such as Boethius of Dacia³¹³ and Martin of Dacia, Simon of

³¹¹ A.20, I, q. I, f. 11vb-12ra. In answering the question about the subject matter of logic, Brito claimed that the “subiectum in logica est ens rationis sive secundae intentionis, subiectum dico commune per praedicationem. Sed subiectum commune per attributionem est syllogismus” (Brito, *Super Porphyrium*, q. 3, p. xvi).

³¹² On the *Modistae* see J. Pinborg, “Die Logik der Modistae” in *Studia Mediewistyczne* 16 (1975), pp. 39-97, reprinted in *Id.*, *Medieval Semantics. Selected Studies on Medieval Logic and Grammar*, ed. by S. Ebbesen, London: Variorum, 1984; J. Pinborg, *Logica e semantica*; C. Marmo, *Semiotica e linguaggio nella Scolastica: Parigi, Bologna, Erfurt 1270–1330. La semiotica dei Modisti*, Roma: Istituto Storico Italiano per il Medio Evo, 1994; *Id.*, “The Semantics of the Modistae”, in S. Ebbesen – R. L. Friedman, *Medieval Analyses in Language and Cognition: Acts of the Symposium ‘the Copenhagen School of Medieval Philosophy’*, January 10-13, 1996, København: C.A. Reitzels Forlag, 1996, pp. 83-104.

³¹³ We have little information about Boethius’ life. The Danish philosopher was perhaps born around 1245, in the 60s and 70s he taught at the Paris Faculty of Arts, probably until the 1277 when some views which he endorsed in his writings were condemned by the Parisian Bishop Stephen Tempier. After that period, he may have joined the Dominican order. Possibly, the condemnation caused the loss of some of his works such as the *Ars Demonstrativa* and the questions on the Aristotelian *Metaphysics*, *Perihermeneias*, *Sophistical Refutation* and *Rhetoric*. Fortunately, part of his writings survived; they cover various subjects, such as grammar, natural philosophy, ethics, metaphysics and logic. His questions on Aristotle’s *Topics* (A.13) which date from the 1270s have been published: Boethius of Dacia, *Quaestiones super librum Topicorum*, in *Boethii Daci Opera. Topica-Opuscula*, ed. by N.G. Green-Pedersen – J. Pinborg, København: G. E. C. Gad, 1976, vol. VI/I. On Boethius see J. Pinborg, “Zur Philosophie des Boethius de Dacia. Ein Überblick”, in *Studia Mediewistyczne* 15 (1974),

Faversham,³¹⁴ Thomas of Erfurt and Radulphus Brito himself. In their grammatical and logical writings, these authors introduced a novel approach to language and new ideas in semantics. They understood logic as a science, rather than as an art and in order to fulfil the requirements of scientificity, the Modists needed to assign an immutable and stable object of study to logic, which they identified in the second intentions that presupposed the first intentions (“*secundae intentiones fundatae in primis intentionibus*”). Their interest in the mental aspect rather than in the external expression of concepts and reasoning led modistic logicians to refuse the view of logic as a *sermocinalis* science and to opt for the alternative interpretation of logic as a *scientia rationalis*. Second intentions indeed were psychological entities, they were metalinguistic concepts as well as the foundation for the meaning of the second intentions themselves. In other words, they were the extramental beings conceptualized or known by the intellect, which considered the accidental properties of the *modus essendi* of the extramental items.³¹⁵ Specifically, the second intentions which were dealt with in logic were metalinguistic and high-level concepts such as genus, species, difference, proposition, affirmation, syllogism, topics. Modistic logicians also understood the topics in light of their theories of second intentions. They deemed the *loci* to be *habitudines* or relations between logical high-level concepts, such as genus and species, which could be applied to various

pp. 165-185; S. Ebbesen, “Boethius of Dacia: science is a serious game”, in *Theoria* 66 (2000), pp. 145-158; S. Ebbesen, “The Man who Loved Every: Boethius of Dacia on Logic and Metaphysics”, in *The Modern Schoolman*, 82 (2005), pp. 235-250.

³¹⁴ Simon of Faversham (1260ca-1306) was an English philosopher; after having studied at Oxford, probably he was master of Arts in Paris in the 1280s. From the last decade of the 13th century he was back in Oxford, where he received his degree in theology and was named chancellor in 1304. Simon’s extant writings were the outcome of his Parisian teaching activity and covered all the books of the ‘standard’ *Organon*, and some of the Aristotelian physical and biological writings; he commented also on Peter of Spain’s *Tractatus* and Priscian’s *Institutiones Grammaticae*. His writing disclosed influences of various authors, such as Thomas Aquinas, Henry of Ghent, Gilles of Rome and Peter of Auvergne. Simon’s *Dicta* or literal commentary on the *Topics* (1280s) is preserved in a single manuscript from the 15th century, Leipzig, Universitätsbibliothek, ms. 1368, ff. 24ra-43ra. This copy, to which I will refer, does not cover *Topics* IV.5 127a20-VII.3 153a10. On Simon see M. Grabmann, *Die Aristoteleskommentare des Simon von Faversham: Handschriftliche Mitteilungen*, Munich: Verlag der Bayerischen Akademie der Wissenschaften, 1933; C.H. Lohr, “Problems of Authorship concerning some Medieval Aristotle Commentaries”, in *Bulletin de philosophie médiévale* 13 (1971), pp. 131-36. On the *Dicta* see Green-Pedersen, *The tradition*, p. 391, A. 18.

³¹⁵ “Quaedam cognitiones vel rationes intelligendi rem sive saltem res cognitae sub istis intentionibus secundis ut sub quodam respectum vel sunt res intellectae ut sunt in respectu tali” (A.20, I, q. 1, f. 11va).

arguments in virtue of their generality.³¹⁶ Angelus provided us with a clarifying enumeration of the four senses assigned to the polysemantic term *locus*. First, a topic was the maximal proposition; secondly, it was the difference of the maximal proposition; thirdly, *locus* amounted to the Aristotelian *consideratio*;³¹⁷ finally, a topic was the middle term of syllogisms.³¹⁸ This quadripartition was not introduced by the Augustinian friar himself, it is found also in Robertus de Cilnacobi (A.1) who enumerated the four meanings of *locus* as “maxima et differentia maximae <et> consideratio et medium.”³¹⁹

4.1.4 Another interesting remark came from Brito, who offered a conceptual distinction between a dialectical *locus* and a dialectical *consequentia*. Dialectical topics were the principles of dialectical consequences since the validity of the connection between the antecedent and the consequent of the dialectical consequence was granted by the intentional relation holding between the second intentions corresponding to the terms appearing in the antecedent and in the consequent of the dialectical consequence:

Licet quidam dicant quod locus et consequentia non differunt, differunt tamen
quia locus est habitudo confirmans consequentiam sicut dicendo sic ‘est sanum,

³¹⁶ Green-Pedersen provided an in-depth exposition of Boethius’, Simon’s and Brito’s views about dialectical topics in *The Tradition*, pp. 228-240; see also Marmo, “La topique”, pp. 346-350.

³¹⁷ That this issue was interesting is confirmed by a marginal note in A.11, at the end of the first book, which was drawn from Angelus’ commentary: “Nota quod locus vel maxima propositio potest dupliciter considerari vel secundum substantiam vel secundum usum. Philosophus in sequentibus <libris> [scil. II-VII] determinat de loco secundum suum usum, Boethius secundum substantiam. Et quia ‘locus’ dicitur secundum substantiam, secundum operationem vero dicitur ‘consideratio’ ideo hic appellantur ‘considerationes,’ sed in *Thopiciis* Boetii ‘loci’. Et quia ista instrumenta ordinantur ad ipsam maximam propriam et ad ipsum syllogismum secundum substantiam, ideo ipsae maximae propositiones, quae in sequentibus libris dicuntur considerationes, hic per comparisonem ad dicta instrumenta appellat eas locos philosophus. Et in hoc terminatur summa primi libri secundum Angelum” (A.11, f. 55r).

³¹⁸ “Notandum quod locus potest accipi multipliciter. Uno modo idem est quod maxima, alio modo idem est quod differentia maximae [...], alio modo sumitur pro consideratione et isto modo sumpsit philosophus prius [scil. books II-VII] locum [...], alio modo idem est quod medium” (A.17, f. 169va).

³¹⁹ A.1, f. 140a-b. When introducing the various topics, Robertus often qualified the *maxima* as the ground of the *consideratio*: “*Alius locus*. <Philosophus> dat aliam considerationem, quae fit ex modo ex parte subiecti. Prima consideratio fundatur supra hanc maximam: ‘nihil quod inest secundum alium modum quam ut accidens inest ut accidens’. Et in ista parte sic procedit: primo dat considerationem et est: si aliquid assignatur inesse ut accidens videndum est si insit ut genus vel ut diffinitio vel ut proprium et si hoc non inest ut accidens et istam considerationem doceat extra” (A.1, f. 105a).

ergo non est aegrum'. Habitudo istorum ad invicem, scilicet sani et aegri, quae est quod si unum insit subiecto alterum simul non inest, ista habitudo est locus et consequentia confirmatur per talem habitudinem sive locum. Ita quod locus et consequentia differunt sicut principium et principiatum. Locus est sicut principium et confirmans, consequentia autem sicut principiatum. Unde et propter hoc, quia different, <locus> denominatur ab inferente sive ab antecedente, sed consequentia denominatur a consequente, quia in antecedente est principium illationis et quia locus dicit principium illationis, ideo locus denominatur ab antecedente; sed consequentia dicit processus rationis ab uno in aliud et ideo consequentia denominatur ab eo quod habet rationem termini.³²⁰

Although beings of reason (*entia rationis*) had a psychological nature, the Modists stated that second intentions were not arbitrarily produced by the intellect, they were not a mere *figmentum intellectum*. They indeed possessed an objective value in virtue of their ontological foundation - of their being *fundata in re*. As we have seen, the real foundation for dialectical concepts and dialectic in general was commonly acknowledged by earlier commentators of the *Topics* and mainly by the 'pluralists'. Despite the evident exterior similarities, however, these authors' and Modists' claims were profoundly distant from each other. The analysis of a specific case will show the difference.

4.1.5 In his exegesis of the chapter on the ten categories (*Topics* I.9), Robert (A.7) had limited himself to the observation that the Aristotelian categories concerned the *modus praedicandi* of things. In the profound explanation of the same text, Simon of Faversham went much further in developing an almost fully-fledged theory of the derivation of the categories from the modes of being: according to him, the ten categories were *modi praedicandi* drawn from the *modi essendi*. Consequently, Aristotle's *praedicamenta* could be considered under a twofold perspective. On the one hand, insofar as they expressed the various ways in which being existed outside the soul (*modi essendi*), the categories were the proper object of metaphysical

³²⁰ A.20, II, q. 13, f. 34ra.

analysis. On the other hand, they were also second intentions, that is mental concepts (*conceptum praedicamenti*), and as such they were studied by natural philosophers (*quantum ad modum abstractionis*), logicians and dialecticians, who examined the various ways in which being was predicated (*modi praedicandi*).³²¹ In the case of modistic logicians, the ontological foundation of high-level concepts had a far wider scope of application than the analogous thoughts found in earlier commentaries on the *Topics*. First, because the metaphysical grounding covered explicitly not only dialectic, but also logic and grammar. Furthermore, in the case of modistic logicians it was incorporated into a general theory.³²² According to the Modists, indeed, the real properties (*modi essendi*) of extramental items were mirrored in the ways of understanding (*modi intelligendi*) and of expressing (*modi significandi*) them:

De quo est logica, illud est modus rei [...] ergo illud, de quo logica est, ad rem ipsam reducitur et ex ipsa acceptum est [...] In tantum logica a re ipsa et proprietatibus eius regulatur, quod etiam partes logicae a re ipsa ordinem habent et etiam intellectus in apprehendendo, componendo et ratiocinando. Et quia res et proprietates sive *modi essendi* illarum consimiles sunt apud omnes et mutari non possunt eo modo, quo sub arte et scientia cadunt, ideo eadem est logica apud omnes et mutari non potest. Per eandem enim causam extremum de eodem concludit latinus et graecus syllogismo eodem in specie. Aliter enim logica translata nobis ex lingua graecorum non esset eadem in specie.³²³

³²¹ A.18, f. 27va and 40va-vb, where Simon repeated that the metaphysician and the dialectician differed *ex parte obiecti*, since the former was concerned with extramental things and their natures, while the latter with “intentiones et conceptus rerum”. He added two further differences: 1) “ex parte finium ad quos suas considerationes ordinant: dyalecticus ad aggenerandum fidem [finem *ms.*] et opinionem, demonstrator scientiam et opinionem et veritatem”; 2) “in modo considerandi: dyalecticus ea quae considerat, considerat per communia et generalia, philosophus per specialia et propria”. Cf. Boethius of Dacia, *Quaestiones*, I. qq. 27-28, pp. 71-74. Commenting on *Topics* I.9, similarly to Simon, Angelus stated the deduction of the Aristotelian categories from the real property of beings: “cum ista praedicamenta sint res extra animam res ipsae sunt in eis per se et per eo quod significant, sed cum ista praedicata sint intentiones in anima sunt in praedicamentis non per se, sed per reductionem ad res a quibus mediate sumuntur non cum sint in eis per eo quod significant sed per eo a quo nomen impositum unum” (A. 17, f. 15va).

³²² Marmo, “La topique chez les modistes”, pp. 337-338.

³²³ A.13, p. 4. Boethius discussed the ontological grounding of logical concepts in many places of book one (i.e. q. 7: “Tota logica de necessitate est accepta a rebus [...] Et si esset alia natura alia esset logica”, p. 26) as well as of other books, e.g. IV, qq. 6-7, pp. 208-212; q. 9, pp. 215-215; VIII, q.1, pp. 309-310.

Along with the doctrine of the *modi intelligendi* and of the second intentions as the proper object of the *logica docens* (and the *modi sciendi* for the *logica utens*), the isomorphism between the ontological and the conceptual levels (*modi essendi* and *modi intelligendi*) was a further common feature of modistic logicians.³²⁴

4.1.6 A parallel between the Modists' commentaries on Aristotle's *Topics* and those of their predecessors discloses manifold differences, which stemmed from the Modists' acquaintance with the newly introduced paradigms, such as Thomas' partition of logic and the intentionalistic logic, as well as from their semantics and logical theory.³²⁵ The first difference which stood out was the change of literary genre. While Simon of Faversham still stuck to the ancient sentence-form commentary, Boethius of Dacia and Radulphus Brito opted for the question-form alternated by few paraphrases.³²⁶ A novel feature common to modistic commentaries was the higher attention they devoted to semantic and metalogical issues, in spite of the literal elucidations of Aristotle's words. This attitude toward topics dealing with general subjects, along with their interests for semantics and with their syntactical approach, prompted these commentators to introduce novel questions in relation to the *Topics* and, in the case of Simon, to develop fresh exegeses of the text. We will have an overview of both these aspects through the examination of some passages of Simon's *Dicta*, which will reveal a development in the reception of the Aristotelian *Topics*.

³²⁴ A detailed and meticulous account of the peculiarities of and divergences between the views endorsed by Boethius, Simon and Radulphus falls outside the scope of this chapter. For the characteristic of the Modists' attitude toward logic see Pinborg, "Die Logik der Modistae".

³²⁵ For Simon's and Boethius' acceptance of Albert's and Thomas' paradigms see Marmo, "Suspicio", pp. 170-172; for Brito's refusal of the Thomistic model see *ibid*, pp. 185-187.

³²⁶ As was usual in prefaces to logical writing of the last quarter of 13th century, Boethius and Brito opened their commentaries on the *Topics* with an ethical introduction, in which the metaphysician or philosopher was placed at the peak of men's hierarchy in virtue of their natural and acquired superiority; a similar example is found in the anonymous prologue to Porphyry's *Isagoge* analysed by C. Marmo, "Anonymi Philosophia 'Sicut dicitur ab Aristotile'. A Parisian Prologue to Porphyry", in *Chaiers de l'Institut du Moyen-Âge Grec et Latin* 61 (1991), pp. 140-146; for Boethius see A. A. Robiglio, "The Thinker as a Noble Man (*bene natus*) and Preliminary Remarks on the Medieval Concepts of Nobility", in *Vivarium* 44 (2006), pp. 205-247.

4.2 Boethius of Dacia, Simon of Faversham and Radulphus Brito.

4.2.1 Modistic logicians agreed in deeming logic a rational science, and since dialectic was a part of logic, they considered dialectic a rational science centred around dialectical syllogism.³²⁷ In treating these issues, the Modists employed the same hermeneutic categories of their predecessors, at times however reshaping them, as in the case of the pair *docens-utens*, upon which Simon and Brito conferred an epistemological nuance. Conventionally, the term *docens* referred to the theory of dialectical syllogism and to its scientific treatment of this subject (*traditur et docetur demonstrative*), while the term *utens* denoted applied dialectic, namely the probable dialectical reasoning put to use in other sciences for reaching a merely probable, not scientific knowledge. Simon refused this interpretation of the twofold aspects of dialectic, and assigned a marked epistemological tone to the conceptual pair *docens-utens*, which he understood in the light of the *Nicomachean Ethics* as habits of the souls, respectively as science and opinion:

Dialectica igitur docens nihil aliud est quam habitus animae aggeneratus in intellectu speculativo de sillogismo dyalectico et eius partibus et proprietatibus per causas et principia. Sed dyalectica utens est habitus aggenerativus in animam per sillogismum dyalecticum quia dyalectica docens docet constitutionem sillogismi sed utens iam utitur sillogismo constituto.³²⁸

³²⁷ A.18, f. 24ra. Brito specified that the dialectical syllogism starting from probable premises did not amount to the modal syllogism described in the *Prior Analytics* since the former started from premises having contingent matter while the latter had contingent premises. Thus, Brito discriminated between natural and logical contingency: “aliud est dicere propositiones de modo contingentis et propositiones contingentes” (A.20, f. 12vb).

³²⁸ “Nota quod dyalectica dupliciter consideratur. Uno modo ut est docens, secundo modo ut est utens. Et licet ista verba sint communia *ill.* tamen non bene intelliguntur, ideo notandum est ad intellectum huius quod dyalectica est habitus animae existens in intellectu speculativo sicut in subiecto. Modo talis habitus potest comparari ad duo, primo ad causas et principia per quae inesse conservatur et in intellectu speculativo per doctrinam aggeneratur; sic accipiendo dyalecticam solum est docens. Soli enim docent qui per causas et principia docent ut dicitur in prohemio *Metaphysicae*. Alio modo accipitur per comparisonem ad scibilia aliarum scientiarum quibus per sui usum applicatur et sic vocatur utens, ut malleus qui per sui usum applicatur ferro. Et nota quod ista distinctio non est applicabilis omnibus scientiis quia solum illae scientiae quae disputant ad alias scientias sunt sic distinguibiles ut est grammatica, logica, rethorica” (A.18, f. 24ra); cf. A.20, I, q. 1, f. 12ra.

Subsequently, he linked the pair *utens-docens* to the inventive-judicative parts of logic, thus making explicit what earlier commentators had left implicit, namely that the applied dialectic (*utens*) coincided with the inventive part of logic, and the *docens* with the judicative and analytic part, since it “docet resolvere sillogismum in suas partes”.³²⁹ Brito introduced an additional noteworthy subdivision of dialectic into the *innata*, namely the natural but imperfect capability of reasoning shared by human beings, and the acquired (*artificialis*) dialectic, which had been formalized by Aristotle and was proper to learned men alone.³³⁰

Similarly to his predecessors, Simon analysed the definition of syllogism found at the beginning of the *Topics*, but with a special emphasis for its grammatical implications. The modistic logician sided with Albert the Great in affirming that absolute syllogism was analogical in respect to its species,³³¹ while he added that it could also be considered an unqualified whole (*totum in modo*) whose qualified parts were the various types of syllogisms.³³² Possibly, the Dominican was also Simon’s source of inspiration for the twofold understanding of syllogism as inferring and *concludens* (or inferring and probative), which the British logician introduced on accounting for the differences between the Aristotelian and the Boethian definitions of syllogism: while Boethius dealt with the probative syllogism, in his *Topics* Aristotle was concerned with the inferring syllogism. Although Brito did not use the terminology employed by his predecessors and Simon, he also admitted a twofold operation performed by syllogisms, namely to infer and to prove the conclusion.

³²⁹ Brito dismissed this interpretation and claimed instead that a science is said *resolutoria* properly speaking since it dealt with the “modum resolvendi et iudicandi, secundum quem aliquis scit resolvere aliquid in suas causas et principia, et isto modo proprie liber Priorum et Posteriorum dicuntur resolutorii vel iudicativi”. Similarly, a science was *inventiva* properly speaking, since it taught the “modum inveniendi media”, as the *Topics*; see A.20, I, q. 7, f. 13va and Green-Pedersen, “On the interpretation”, pp. 8 and 41.

³³⁰ A.20, I, q. 16, f. 17ra.

³³¹ A.18, f. 24vb; in his *Dicta*, Simon mentioned Albert many times, once along with an unknown Alanus. Similarly to Simon, even Brito mentioned Albert’s commentary on the *Topics* in many of his *Quaestiones*. Unlike Simon, Boethius did not openly endorse the analogical predication of syllogism, questions, see A.13, I, q. 10, pp. 35-39 and q. 16, pp. 50-53. On the influence of Albert the Great on Simon see S. de Faverisham, *Quaestiones veteres et novae super libro Elenchorum*, ed. by S. Ebbesen – T. Izbicki – J. Longeway – F. Del Punta – E. Serene – E. Stump, Toronto: Pontifical Institute of Mediaeval Studies, 1984, p. 11.

³³² Even Brito claimed that the simple syllogism is “totum in modo respectu sillogismi dialectici et demonstrativi” (A.20, I, q. 8, f. 14ra).

4.2.2 Interestingly, he specified that “*probare conclusionem*” had a wider and a narrower meaning, which connected with the Boethian definition of argument as the reason producing belief about a doubtful proposition. According to the general but improper sense of *probare* as signifying the correct disposition of the extreme and middle terms, simple syllogisms proved the conclusion. In the appropriate meaning, to prove concerned the inherence of the predicate in the subject, and from this syntactical perspective ‘to prove’ fell outside the scope of syllogisms.³³³ This distinction then, between inferring and probative syllogism, was strictly intertwined with Simon’s claim that a dialectical syllogism was valid if it was made up of the proper matter, namely probable propositions, and of the apt specific or *ad propositum* form. Brito specified that dialectical and demonstrative syllogisms shared the substantial syllogistic form, namely the form of the absolute syllogism, while they differentiated in virtue of the accidental form. Along with the probability and necessity of premises (the *dispositiones materiales*), the accidental form accounted for the diverse aims and operations performed by dialectical and demonstrative syllogisms, namely the production of opinion and knowledge. Although he did not mention any type of form, Boethius of Dacia conceded that dialectical syllogism was based on the topical relation. These claims seemed to incline toward the acceptance of the pluralist view, nevertheless modistic logicians did not admit it. They intended instead to stress the psychological and epistemological facet of reasoning.³³⁴

³³³ A.20, I, q. 8, f. 14va.

³³⁴ A.18, f. 25ra. Boethius of Dacia explicitly refused the pluralists’ view: “Qui enim dicit quod dialecticus et demonstrativus in specie differunt, debet dicere quod alia est forma specialis in dialectico quam in demonstrativo, scilicet alius modus et alia figura et quid aliud, et hoc est grave fingere” (A.13, I, q. 10, here p. 38). Nevertheless, Boethius acknowledged that while in simple syllogism it was required the proper relation between the three terms, “habitus autem fundata super communes intentiones requiritur in syllogismo dialectico” (A.13, I, q. 18, pp. 57-58). For Brito’s accidental form see A.20, I, q. 8, f. 14ra-rb. Furthermore, Radulphus Brito made a clear distinction between the *illatio* and the *probatio* when discussing the dialectical induction. Within this framework, he stated that a valid inference was a consequence in which it was impossible that the “*antecedens esset verum consequente existente falso*”, otherwise “*ex vero sequeretur falsum*”, and that this was untenable (*inconveniens*) since “*ex vero non sequitur nisi verum*”. An induction which was a *bona illatio* could however be an invalid dialectical induction when it failed to prove the conclusion. And this happened when the predicate was known to inhere more in the subject of the consequent than in the subject of the antecedent: “*potest dici quod praedicatum est notius de termino universali quam de singularibus in quibus inducitur, sicut homo per hoc praedicatum quod est animal est notius de homine quam de Sorte et ideo si quis sic inducat: Sor est animal, Plato est animal etc, ergo omnis homo est animal, ibi non esset inductio dyalectica immo petitio principii, cum non procedat ex notioribus quia notius est animal inesse homini quam Sorti. Unde licet ibi sequatur conclusio de*

4.2.3 The Modists' view of an intentionalistic dialectic coupled with the dismissing of both the pluralists view and the interpretation of the Aristotelian definition of syllogism in terms of univocal predication of the simple syllogism, allowed Boethius, Simon and Radulphus to push to the limit the 'formal' identity between diverse syllogisms. Unlike the commentators who had read the *Topics* before them, the three Modists were directly faced with the question of whether the numerically same syllogism could be dialectical and demonstrative. This issue was originally debated within the context of the *Posterior Analytics*,³³⁵ and after the *Modistae* it became a conventional topic found in almost all commentaries on the first book of the *Topics* from the beginning of 14th century onwards. They acknowledged that the same syllogism could be demonstrative, dialectical or sophistical, thus implicitly admitting that there was not a token-syllogism or an uninstantiated essence of syllogism, and that particular syllogisms were intrinsically undetermined or undifferentiated. However, some objections could be raised against this view upheld by Modists. A first criticism claimed that this assumption seemed to violate the predication principle according to which one and the same individual could not belong to more than one species except if the species were subordinate one to the other. Having dismissed the hypothesis of the univocal predication of the simple syllogism over the various types of deductions, Modists could easily avoid this difficulty. A further criticism was raised against the cognitive effects of syllogisms. A demonstrative syllogism started from necessary propositions and engendered certitude and knowledge in the subject, while dialectical syllogism assumed probable premises and produced mere opinion in the agent. If, however, there was just a type of syllogism, how could the numerically same syllogism account for the production of different habits in the same person? Modistic logicians could fend off this attack by appealing to both the doctrine of intentions and to the subjective aspect of the understanding of syllogisms. A syllogism was a complex second intention

necessitate non oportet quod sit bona inductio nisi procedat ex notioribus unde non solum de ratione inductionis dialectice est inferre sed probare" (A.20, I, q.39 f. 25vb).

³³⁵ Cf. Aristotle, *Posterior Analytics*, I.33, 89a39-b9.

made up of complex second intentions, the propositions, which in turn were composed of incomplex second intentions, such as genus and species.

4.2.4 Simon explicated that the diverse incomplex mental concepts could be drawn from a single extramental being, whose common nature and various properties were conceptualized under different respects by the intellect, which therefore elaborated upon diverse mental concepts. In like fashion, the various types of complex second intentions, such as propositions, could be drawn from one unique extramental being. If the intellect took under consideration the essential properties of the thing, then the complex second intention, namely the proposition, related to such properties expressed them through the causal and necessary subject-predicate relation. And the syllogism made up of these necessary propositions was a demonstration. Whilst if the intellect took into account only the general properties of a thing, it expressed them through the accidental relation between the subject and predicate. Accordingly, a syllogism whose premises were probable propositions was a dialectical syllogism. And since one and the same person could not contemplate the same thing under different respects at the same time, namely he or she could not start from necessary and probable propositions drawn from the same thing at the same time, it was impossible that he or she could opine and know the conclusion of the deduction at the same time:

Idem sillogismus numero potest esse dyalecticus, demonstrativus, sophisticus unde sicut diximus quod sunt intentiones istae secundae incomplexae genus et species fundantur supra idem obiectum et etiam complexae ut enuntiatio et propositio [...] sed videndum est ulterius quod ista habitudo diffinitionis et diffiniti dupliciter consideratur. Uno modo quantum ad idem realitatis quod importatur per eam, alio modo quantum ad intellectum sub quibus imponuntur [...] Si secundo modo consideretur hoc est dupliciter. Vel considerantur quantum ad intellectus proprios et essentielles sub quibus istae res importantur, verbi gratia: dicamus 'homo est animal rationale mortale' hic possumus considerare duo, rationem diffinitionis, [...]et rationem diffiniti [...] Si consideretur primo modo quia tunc inter diffinitio et diffinitum est necessaria habitudo <et> supra hanc habitudinem fundatur sillogismus demonstrativus. Si

autem respiciamus ad communia intellecti sic supra talem fundatur locus dyalecticus. Ut quando dicitur ‘homo animal’ potes hominem considerare dupliciter. Primo modo quantum ad connaturalem propositum et sic dicendo ‘homo est animal’ hic est processus necessarius. Sed quantum ad propriam considerationem* ut quantum ad rationem speciei, sic est ibi processus accidentalis et probabilis et est ibi ratio signi.³³⁶

According to Boethius, the syllogism could be both dialectical and demonstrative just as the same consequence, e.g. “this is white, therefore it is not black”, could be necessary or dialectical *sive probabilis*.

4.2.5 In their analysis of ‘probability,’ Modists author focused on the semantic interpretation of the objective probability proposed by Albert the Great, which perfectly befitted their interests in semantic issues as well as their theory of the *modi intelligendi* and *significandi*.³³⁷ On the basis of their idea of the priority of the *modi essendi* over the *modi intelligendi*, the three modistic thinkers considered the Aristotelian account of probability given in the *Topics* as a mere description based on signs and concerned with subjective probability, which however was only

³³⁶ A.18, f. 25ra. Cf. A.13, I, qq. 11-12, pp. 39-43, IV, q. 5, p. 207; A.20, I, q. 11, f. 15ra-rb.

³³⁷ “Propositio probabilis, ut vult Albertus supra librum istum, est quando in subiecto est aliquod signum per quod habilitatur praedicatum inesse subiecto et non necessitatur, sed propositio necessaria est quando in subiecto est causa necessaria quare praedicatum sibi inest” (A.20, I, q. 11, f. 14ra). Perhaps due to the necessity of faithfully explaining the Aristotelian tripartite definition of *probabilia*, in commenting on the Aristotelian definition of *probabilia* both Angelus of Camerino and Simon also offered a gnoseological account of probability, which recalled to mind the explanations given by their predecessors: “Ulterius autem est notandum quod triplex est probabile scilicet grossum, mediocre et subtile. Grossum tangit <ibi> *omnibus*, mediocre tangit ibi *pluribus* subtile tangit ibi *sapientibus*. Vide probabile subtile est adhuc triplex [...] ulterius notandum quod circa hoc quod hominum cognoscitorum quidam potissime utuntur virtute sensitiva, quidam ymaginativa, quidam intellectiva. Sensitiva utuntur rudes ut rustici, unde propter tales dicit *omnibus*, et dicit etiam *omnibus* propter ignorantiam multorum; multi enim sunt fatui, propter hoc dicit Salomon stultorum infinitus est numerus. Propter secundos autem dicit *aut pluribus*, propter tertios dicit *sapientibus*” (A.18, f. 25ra). Angelus proposed a lengthy elucidation of the subjective and objective notion of probability. His account of probability considered *ad rem probabile* bore many resemblances with Boethius’ explanation, despite a terminological difference: Angelus used indeed ‘dispositio’ instead of ‘proprietas habilitans’. In the explication of subjective probability (“ad illum cui apparet”), Angelus made a parallel between the threepartite Aristotelian definition of probability and the three types of human knowledge, namely “sensitiva cui est coniuncta ymaginatio, [...] cognitiva vel aestimativa vel creditiva, [...] intellectiva” (A.17, f. 4ra and va, 6vb).

secondary in respect to the objective probability. Indeed according to the three logicians, a proposition was probable not because it appeared (*videtur*) so to the subject, but rather it was reckoned to be probable since it was intrinsically probable, that is because the relation of inherence between the subject and the predicate terms of the proposition was not necessary, so that the predicate could inhere in the subject or not. Specifically, probability denoted an inherent property of the subject that predisposed but did not necessitate the subject to participate in the predicate.³³⁸ Boethius offered a fully-fledged account of the semantic interpretation of probability. In a necessary proposition, he claimed, the subject(*s*) was causally linked to the predicate(*p*) since *s* possessed a property(*q*) that necessitated *s* to partake of *p* and impeded *p*'s contrary from inhering in *s*. Accordingly, in virtue of *s*' essential disposition arising from *q*, *p* and *s* occurred together, e.g. "an opaque body reflects the light" was a necessary proposition since 'opacity'(*q*) made necessary the inherence of 'to reflect light' (*p*) in 'body'(*s*) and did not allow *s* to participate in 'to receive light' (*p*'s opposite). In improbable propositions, the subject possessed a property endowing it with a disposition to have a predicate contrary to the proposed predicated. In the proposition "a murderer loves", the property 'to be a murderer'(*q*) enabled 'man'(*s*) to have 'to hate'(*p*'s opposite) rather than 'to love'(*p*). In probable propositions, instead, the subject's property very much predisposed (*multum habilitat*) the subject to receive the predicate without however making it necessary, so that *s* was still apt to have *q*₁, which endowed the subject with an aptitude for the opposite of *p*: it was possible to have the case in which *s* did not occur with *p* but along with *p*'s opposite. The degree of probability of propositions depended on the higher or lower aptitude that *s*' property(*q*) had to participate in *p* and it was measured on a scale spanning from *probabilis* through *magis probabilis* to *maxime*

³³⁸ "*Probabilia*: nota quod ista diffinitio probabilis non est data per causam sed per signum quia aliquid non dicitur probabile eo quod videtur, sed e converso eo quod est probabile ideo videtur. Unde probabilitas causatur non ex nostra visione sed ex quadam proprietate ipsum subiectum ad participationem praedicati habilitans et non necessitans, ut si dicatur omnis mater diligit. Ista est probabilis et causatur ista probabilitas quoniam in subiecto est quaedam proprietas ut maternitas quae habilitat subiectum ad participationem praedicati et quod probabilitas causatur ex proprietatibus subiecti huiusmodi ratio est, quia probabilitas est passio propositionis sed passio causatur ex principiis intrinsecis" (A.18, f. 25ra). A.13, I, q. 14, pp. 46-49 and the analysis by Ebbesen, "*Boethius of Dacia*", pp. 153-154. Brito briefly touched upon the issue in his commentary, A.20, I, q. 8, f. 14ra.

probabilis, which however did not coincide with necessary propositions. Unfortunately, Boethius did not expand upon the adverb ‘very much (*multum*)’ nor on the comparative and superlative adverbs *magis* and *maxime*.³³⁹

4.2.6 Perhaps, Angelus de Camerino’s elucidation of the topic of accident concerning the inherence of contrary predicates in the subject may shed some light on this problem. In his exposition of this topic, Aristotle had distinguished between things that happened of necessity, for the most part and by chance.³⁴⁰ Angelus stated that this factual distinction stemmed from the various types of relation holding between the subject and the predicate. In necessary things, the inherence of the predicate in the subject was omnitemporally valid, and it held for every particular instance falling under the subject term and it excluded one of the complementary predicates. Whilst the predication characterizing things which happened for the most part was not omnitemporally valid nor did it hold for every individual denoted by the subject term neither did it exclude one of the complementary predicates, although it admitted a propensity for one of them:

illud dicitur inesse de necessitate quod est secundum alteram partem contradictionis determinate, ita quod ad aliam nulla in subiecto remaneat potentia. Illa sunt ut in pluribus quae *magis* sunt determinata ad unam partem quam ad aliam, eveniunt tamen quandoque secundum alteram, et istud dicitur contingens natum ut hominem in senectute canescere; et fere omnia naturalia sunt talia. Et istorum defectus vocatur contingens ut in paucioribus. Illa dicuntur ad utrumlibet quae indifferenter eveniunt secundum unam partem et reliquam ut hominem legere et non legere. Unde sumatur ista distinctio? Ista distinctio est ipsarum rerum praedicatarum de subiectis. Ex habitudine ergo quam potest habere praedicatum ad subiectum potest sumi dictarum rerum distinctio. Haec autem habitudo aut est secundum unam partem contradictionis secundum universalitatem temporum et suppositorum, et sic est res necessaria; aut non. Si non, aut erit res habens talem habitudinem aut habebit habitudinem ad id de quo dicitur secundum utramque partem contradictionis secundum

³³⁹ A.13, I, q. 14, esp. pp. 47-48; IV, q. 5, pp. 206-208, esp. p. 207.

³⁴⁰ Aristotle, *Topics*, II.6, 112b1-20.

universalitatem temporis et suppositorum, et sic est contingens ad utrumlibet; aut non, et tunc aut *habebit habitudinem ad subiectum secundum utramque partem contradictionis ita tamen quod secundum unam magis quam secundum alteram secundum differentiam temporis et suppositorum et sic contingens ut in pluribus*, aut non sed e converso et sic est contingens ut in paucioribus.³⁴¹

We could take a step further and connect this semantic explanation of frequency with the semantic interpretation of probability, so that probable propositions would express temporal frequency: in probable propositions, *s'* propensity or potentiality for partaking in *p*, which arose from *q*, would be actualized in a great majority of cases. Thus, the universal proposition “Every mother loves her child” could be considered probable even though it had some counter-instances since ‘motherhood’(*q*) would make likely the inherence of ‘to love her child’(*p*) to ‘mother’(*s*), whilst still allowing *s* to have *q*₁ and to receive ‘to hate’(*p*’s opposite). This would then imply that the semantic interpretation of probability would be derivative and not primary, since it would eventually be grounded on the proto-frequentist interpretation of probability.

In probable propositions, the subject’s capability to possess both *q* and *q*₁ justified the claim that the dialectician could argue in favour as well as against a probable proposition when engaged in dialectical disputations (*exercitationes*):

Bonus enim dialecticus proposita aliqua quaestione statim considerat de quo praedicato est, utrum scilicet de accidente vel de genere vel proprio vel definitione. Quo viso statim recurrit ad artem in dialectica traditam de unoquoque istorum construendo et destruendo, et diligenter circa terminos propositae quaestionis considerat proprietates habilitantes subiectum ad participationem praedicati et ad oppositum praedicati. Et sic circa omnem materiam copiosus erit in argumentis affirmativis et destructivis.³⁴²

³⁴¹ A.17, f. 50va.

³⁴² A.13, I, q. 20, pp. 58-60, here p. 59. Brito made an interesting remark concerning the role played by will in solving problems about which the argument put forward had equal probability and we did not have *rationes magis evidentes et magis eminentes* in favour or against one of the two sides of the horn: “Dicitur problema de quo neutro modo opinamur quia propositiones probabiles eque difficiles quas habemus ad utramque partem non magis credimus uni quam alteri et ideo possibile est quod

Moreover, the subject's openness to have opposite properties q and q_1 also accounted for the dialectician's impossibility to produce knowledge, and for the dialectical practice to be limited to the doxastic realm. Dialectic could produce only opinion, namely the belief that the conclusion proved was true, whilst still admitting the possibility that the opposite conclusion could be probable and true too.³⁴³

4.2.7 The commentaries of the *Modistae* revealed the interest of their authors in specific issues, which were strictly related to the main tenets of modistic semantics. This led Boethius, Simon and Brito to focus on specific passages of the Aristotelian treatise, which had been dealt differently by their predecessors, such as in the case of the Aristotelian description of logical premises found at the end of the first book of the *Topics*. As we have seen, when elucidating this section, earlier commentators expanded upon the relation between logic and the disciplines of the *trivium*.³⁴⁴ Angelus de Camerino sided with Albert the Great in commenting upon Aristotle and assumed that general logic also included poetics, similarly to the *quadrivium* of Gundissalinus.³⁴⁵ In his explanation of the same passage, Simon focused instead on Aristotle's example of a logical proposition, namely "Is the knowledge of opposites the same or not?" This general interrogation indeed implied the particular question concerning the relation between habit and privation, which was one of the four types of opposites enumerated by Aristotle in the eighth chapter of the second book of the *Topics* and in the tenth chapter of the *Categories*.

This issue was particularly relevant from the modistic viewpoint, since the assumed isomorphism between the epistemological (and semantical) and the ontological levels implied the object-directedness of beings of reason (*entia rationis*) towards factual beings. The structural parallel between reality, concepts and

aliquo motu proprie voluntatis vel partem magistrorum vel amicorum aliquis magis inclinatur ad unam partem quam ad aliam" (A.20, I, q. 38, f. 24va).

³⁴³ A.13, I, q. 14, pp. 46-49.

³⁴⁴ Aristotle, *Topics*, I.14, 105b20-25; see *supra* ch. 3.1.

³⁴⁵ "Sub logica comprehenduntur omnes propositiones quae fiunt in materia cuius cognitio quaeritur propter alterum sicut propositiones poeticae, rethoriche et aliae quae sunt in materia, quae habet considerari a scientia quae est pars scientiae rationalis quae logica communi nomine dici consuevit" (A.17, f. 25ra).

meaning seemed indeed to be weakened by the existence of some intentions that did not correspond to any extramental being. This prompted the Modists to elaborate a solution for explaining to what real properties (*modi essendi*) corresponded the intentions of privative beings, such as privation.³⁴⁶ Simon explained that the privative being derived from the positive one. And in the specific Aristotelian example, the same science had to account for both the thing (*habitus*) and its privation by starting from the positive and perfect component of the pair, namely the habit, since the knowledge of the negative and imperfect always resulted from the knowledge of the perfect. It was improper therefore to talk about knowledge of privative beings such as privation since it was indirect and subordinated to the prior knowledge of the positive being.³⁴⁷

4.2.8 The interest of Modist authors in metalogical rather than in logical issues explained the presence of many questions which were not directly connected to the elucidation of Aristotle's text or which were not dealt with in depth nor touched upon at all in previous commentaries on the *Topics*. The second book of the *Topics* offered Boethius and Brito the occasion to raise specific questions concerning universal quantification: on the semantic properties of the universal quantifier 'every' (*omnis*), and on its distribution over the individuals falling under the common term; on the *sufficiencia appellatorum/suppositorum*, namely the minimum number of individuals to be quantified upon (one, three, or none) and on the nature of the particular instances over which 'every' distributed the subject term – namely if on past, present and future referents or only actual *supposita*; on the existential import of universal propositions.³⁴⁸ In his literal commentary on the *Topics*, Simon

³⁴⁶ On this issue, see Marmo, "La topique", esp. pp. 347-350; cf. also C. Marmo, "Types of Opposition in the Postpraedicamenta in Thirteenth-Century Commentaries", in J. Biard –I. Rosier-Catach, *La tradition médiévale des catégories (XIIe–XVe siècles)*, Leuven: Peeters, 2003, pp. 85-103.

³⁴⁷ A. 18, f. 29ra: "Loycae autem propositiones ut utrum contrariorum eadem sit disciplina planum est quod sic quia unum se habet in ratione habitus et perfecti aliud in ratione privationi et imperfecti. Philosophus enim vult 4° *Metaphysicae* [scil. V.6 1011b18-19] quod habitus et privatio sunt prima radix contrarietatis. Sed quod se habet in ratione privationis et imperfecti cognoscitur per idem quod habet se in ratione habitus et perfecti; rerum enim est iudex sui et obiecti primo de *Anima* dicit et tertio [scil. III.6 430b21] eiusdem quod punctum et omnis indivisio cognoscitur per habitum et quia tunc unum contrariorum habet se in ratione habitus et perfecti reliquum in ratione imperfecti et privationis et quia privatio cognoscitur per habitum ergo etc".

³⁴⁸ A.13, II, qq. 1-6; A.20, II, qq. 2-8. Scholars have analysed these issues: Pinborg, *Logica*, 96-104; S. Ebbesen, "Termini accidentales concreti. Texts from the Late 13th Century", in *Cahiers de l'Institut du*

dealt with that same issues about universal quantification which confronted his fellows and which had not been taken into account by masters who had composed literal commentaries on the Aristotelian treatise. The difference between these commentators' and Simon's approaches to the text already stood out in the elucidation of the opening line of the *Topics*, where Aristotle had claimed that the main scope of the treatise was to provide a method for arguing about *any* subject proposed (*de omni problemate*). Both the pluralists and the advocates of the unity of the form struggled to explain Aristotle's preference for the ablative case instead of the more suited 'ad' plus accusative, which better expressed the end toward which the syllogistic deduction was directed. Probably influenced by sophismatic literature such as the *Distinctiones Sophismatum*, Simon pointed out a problem of quantification stemming from the syntagm, namely whether 'every' distributed 'problem' over the species of problems or over individual problems. The commonly held view about this issue, which was endorsed by many 13th century logicians, was that properly speaking universal quantifiers distributed the common term over the species and not over the individuals. *Modistae* such as Boethius and Brito held instead that the syncategorematic term 'omnis', conjoined to a common noun, distributed the common noun over all its *supposita* or particular instances, and Simon aligned himself with them:

Ad distributionem igitur tria requiruntur: distribuens et distribuibile et in quod fit distributio.³⁴⁹ Istis modis prenumeratis dico quod impossibile est quod fiat distributio in speciebus et non individuus et ratio huius est triplex. Suppono primo quod hoc signum 'omnis' significat quoniam universaliter in secundo *Perihermenias* [scil. 7, 17b13], ergo 'omnis' est distributio termini universalis. Sed terminus non solum est universalis respectu specierum sed etiam respectu

Moyen Âge grec et latin 53 (1986), pp. 37–150; Id., "The man"; C. Marmo, "La topique"; A. M. Mora Marquez, "Boethius of Dacia and Radulphus Brito on the Universal Sign "Omnis"", in *Logica Universalis* 9/2 (2015), pp. 193–211.

³⁴⁹ Similarly to Brito and Boethius, Simon also affirmed that the universal quantifier 'omnis' did not relate to the subject-predicate relation – as held by many authors such as Peter of Spain, Robert Kilwardby and Albert the Great – but that it rather expressed the relation between the quantified common noun and its particular instances (*supposita*). The opinion "quod signum non distribuit subiectum in comparatione ad predicatum" was condemned in 1277 by Kilwardby at Oxford; on this issue see Marmo, "The Semantics", pp. 92–93.

individuum, ergo non solum distribuit terminum in comparisonem ad species sed etiam ad individua. Sed hoc non esset nisi distribueret terminum non solum pro speciebus sed etiam pro individuis. Ratio autem secunda est ista: quando ad antecedens sequitur consequens, tunc ad consequens distributum sequitur antecedens distributum ut 'omne animal est,³⁵⁰ ergo omnis homo est'; sed hoc non est nisi terminus distribueret per speciebus et individuis. Item quando duo sunt essentialiter ordinata ita quod unum est superius et prius et aliud posterius et inferius tunc ad distributionem superioris sequitur distributio inferioris. Hoc autem non esset si fieret distributio solum in speciebus et non individuis.³⁵¹

Simon elucidated the Aristotelian words by adopting the modistic viewpoint and claimed that Aristotle's treatise enabled anyone to argue about every *individual* question put forward by him and not about all *species* of questions.³⁵² The beginning of the second book of the *Topics* seemed to invite Simon to expand more this subject. Indeed the second topic consisted in considering all the subjects to which a predicate was universally said to belong or not belong. The Stagirite specified that such scrutiny had to be conducted by looking "species by species", without descending to the undefined multiplicity of particular instances. A few lines below, however, Aristotle explained that in the topic's destructing function, the inquiry had to proceed from the primitives downwards and that "if no clear result [wa]s reached so far in these cases, you should again divide these until you come to those that are not further divisible". In his constructing function, this rule was useful for general

³⁵⁰ Vel erit *add. ms.*

³⁵¹ A.18, f. 31ra; cf. A.20, II, q. 10, f. 32vb.

³⁵² A.18 f. 24va; cf. A.20, II, q. 10, f. 32vb. The anonymous commentator A.9 faced this question and his answer went in quite the opposite direction of Simon's solution: "Ad hoc potest dici ut salvetur antiqua distinctio [*scil.* pro singulis generum vel pro generibus singulorum] quod aliquando fit distributio pro singulis generum aliquando pro generibus singulorum semper tamen pro individuis. Sed notandum quod contingit considerare singularia dupliciter aut in se aut secundum quod uniuntur in suo communi, scilicet in specie vel genere et per talem unionem sumuntur et perpetrantur sicut enim genera et species secundum esse quod habent in individuis sunt corruptibilia sicut individua sed* e contrario individua secundum quod uniuntur in suo universali sunt perpetua sicut universalis dicendo ergo distributionem fieri pro generibus singulorum quando fit distributio pro singularibus in materia specierum consideratis et per multiplicationem specierum multiplicatis possit praedicta diffinitio sustineri ergo esset intellectus Aristotelis de omni problemate idest de omnibus problematibus singulorum secundum quod praedicta singularia uniuntur in suis universalibus quae sunt quatuor [*scil.* quatuor praedicabilia] ut postea videbitur" (A.9, f. 157va).

inductions since once the inherence of the predicate in the subject was ascertained in all or in the great majority of cases scrutinised, then the disputant was inclined to concede the inherence universally.³⁵³ Unlike earlier commentators, Simon developed a deep explication of this topic, which he classed among the intrinsic topics from a quantitative whole, and treated it as a problem of *distributio*, without however expounding upon the *restrictio* of the supposition of the subject term. Consistent with the main tenet of the modistic understanding of the syncategorematic term ‘omnis’, Simon rejected the interpretation proposed by some unnamed authors who had restricted the scope of the topic to the species, insofar as they had interpreted the Aristotelian syntagm “*inesse omnibus*” in light of their view according to which ‘omnis’ distributed the common noun over species alone. This opinion, objected Simon, had revealed itself to be erroneous in other circumstances, for example when it was applied to solving the sophism “Every animal was in Noah’s Arc”, thus leading to the concession that the sophism was true if ‘omnis’ divided ‘animal’ into its species and not into the particular instances of the species.³⁵⁴ Although the Stagirite’s subsequent specification, namely “*considerare autem secundum species et non in infinitis*”, seemed to favour this interpretation, Simon’s exegesis moved in quite the opposite direction. He emphasized instead Aristotle’s following words, “*ea dividendum usque ad individua*”, and explained that in this topic the Stagirite meant to specify that if the analysis of the species, considered *distributive* and not *collective*, did not reveal any counter-instance against the inherence of the predicate in the subject, then the scrutiny had to descend to particular instances:

Opinabantur Aristotelem velle quod possit fieri distributio in speciebus
et non individuīs, sed hoc est contra Philosophum [...] Manifeste autem

³⁵³ Aristotle, *Topics*, II.2, 109b13-29; “Alius locus inspicere quibus inesse aut omnibus aut nulli dictum est. Considerare autem secundum species et non in infinitis [...] si enim in omnibus videatur divisionem proferentibus vel in pluribus, concedendum et universaliter ponere aut instantiam ferre in aliquo non sic” (*AL*, p. 32).

³⁵⁴ Perhaps the source for the opinion held by the unnamed *quidam* is Peter of Spain, *Tractatus*, XI.14, pp. 204-205; on Peter’s critical target, perhaps a rough interpretation of Roger Bacon, see Alain de Libera, “Référence et quantification: Sur la théorie de la distribution au XIIIe siècle”, in A. de Libera – A. Elamrani-Jamal – A. Galonnier, *Langages et philosophie: Hommage à Jean Jolivet*, Paris: Librairie Philosophique J. Vrin, 1997, pp. 177-200.

Philosophus dicit quod si non est manifesta instantia in speciebus, oportet
demum considerare usque ad individua.³⁵⁵

Conclusion

Green Pedersen considered the 13th century tradition of the topics as a continued “development along the same line”. He ended the first section of the chapter devoted to the 13th century conception of the *locus* by drawing some strong conclusions, one of which conjectured a possible role for the topics in the increasing preponderance acquired by the notion of intention in logic: “It is tempting to add, however, that the development which leads to the concept of concrete second intentions agrees extremely well with the loci, and since they participate in it from the first beginnings, we may perhaps assume that the topics has contributed to it and to the central position which it occupies in the logic of the 13th century”.

However, in the light of scholarly research, this continuist view, which merges authors from various periods into a coherent picture and overlooks the basic divergences, seems hardly tenable.³⁵⁶ Indeed, if one expands the horizon of the inquiry to include the intellectual framework and the authors’ philosophical orientations, it will emerge the impact of the modified understanding of logic on authors’ reflections on dialectic. Once the commentaries on the *Topics* are historically and doctrinally contextualized, Green-Pedersen’s hypothesis actually appears to work the other way around. The role of prominence which second intentions acquired in logic, especially after the spread of the Avicennian notion of ‘intentionalistic logic’, contributed to the different developments and refinements of the doctrine of the topics, along with the intellectual orientations of specific authors. Specifically, the adoption of a more historical approach, which emphasizes both the

³⁵⁵ A.18, f. 31ra-rb; cf. A.20, II, q. 10, f. 32vb.

³⁵⁶ Green-Pedersen, *The Tradition*, pp. 228 and 240; and Marmo’s criticism of Green-Pedersen’s continuist view: Marmo, “La topique”.

undeniable points of contact and distance between authors from different decades, has disclosed some interesting issues in modistic commentaries on the *Topics*.

In opposition to their predecessors' view, according to which logic was a sermocinal science, the Modists considered logic and dialectic as rational sciences dealing with second intentions. The modistic doctrine of second intentions was strictly intertwined with the general assumption of the isomorphism between the ontological, epistemological and semantic levels, which was a further main tenet of Modist semantics.

In particular, the subject-matter of dialectic was the dialectical syllogism, which modistic commentators did not understand as structurally – formally or materially – different from the other types of syllogism. Their interpretation had indeed a more subjectivist tone. Boethius of Dacia, Simon of Faversham and Radulphus Brito reduced the differences between the types of syllogisms to the diverse ways in which the real properties of things (*modi essendi*) were conceptualized by the intellect (*modi intelligendi*). Accordingly, the Modist logicians openly rejected the doctrine of the plurality of forms proposed by some earlier commentators, just as they refused the alternative view of the univocal predication of the simple syllogism over the various species of syllogism. They opted instead for the analogical predication of simple syllogism, which allowed them to acknowledge that the numerically same syllogism could be dialectical and demonstrative, thus paving the way for generations of future commentators who shared this view.

The interest which Boethius, Simon and Radulphus took in semantic issues led them to analyse the *Topics* in a different way from previous commentators and to assign more relevance to metalogical questions which were beyond the scope of the mere literal explication of the text, and to develop new exegeses of the text, as in the case of the notion of probability, of which they offered a semantic interpretation which greatly departed from the gnoseological understanding of *probabilia*, which was peculiar to their predecessors.

Some interpretations proposed by Boethius of Dacia, Simon of Faversham and Radulphus Brito were destined to fall into oblivion. Other ideas were instead inherited by some 14th and 15th century authors, such as Buridan, the anonymous masters who lectured on the *Topics* at the University of Prague and Cracow at the

turn of 15th century, and some 15th century Parisian masters of Arts, whose notion of probability echoed that of Boethius.

Chapter Five. “Legere tenetur libros omnes Topicorum”. The puzzling case of the missing English manuscript tradition of the *Topics*.

5.1. Reading and commenting on Aristotle’s *Topics*. Who read what and where?

5.1.1 “Unde literatus ille nostri temporis vir, magister Radulphus Niger, domini mei regis iunioris concurialis, cum Topica Aristotelis et Elenchos versibus glossaret, ait:

Sunt loca, sunt gentes, quibus est mactare parentes,
Cum mors aut pietas aut longa supervenit aetas.”³⁵⁷

In his *Otia imperialia*, written at the beginning of 13th century, Gervase of Tilbury provided us with the only extant testimony of *magister Radulphus’* verse commentary on Aristotle’s *Topics*. Possibly, it was composed by Ralph of Flaix, a Benedictine monk active around the mid-12th century, when the *Topics* had recently been rediscovered and Medievalists were starting to lecture and comment upon them. Soon thereafter, the eight books of the Aristotelian treatise appeared in the first statutes of the faculty of arts of the University of Paris, which were drawn up by the Papal Legate Robert de Courçon in 1215.³⁵⁸ During this early stage of the Parisian

³⁵⁷ Cf. Aristotle, *Topics*, II.11, 115b22-24 “ubi quidem bonum patrem mactare, ut in Trivallis, simpliciter autem non bonum”. The text is quoted by Lohr, “Medieval Latin Aristotle Commentaries”, in *Traditio* 28 (1972), p. 384. Ebbesen proposes to correct “Cum mors aut pietas aut longa” to “Cum mos tum pietas cum longa”, so the verse would state: “there are places and peoples among whom it is both customary and an expression of piety to sacrifice one’s parents when old age come upon them” (S. Ebbesen, “Medieval Latin Glosses and Commentaries on Aristotelian Logical Texts of the Twelfth and Thirteenth Centuries”, in C. Burnett, *Glosses and Commentaries on Aristotelian Logical Texts: The Syriac, Arabic and Medieval Latin traditions*, London: Warburg Institute, 1993, pp. 129-177, here p. 141, fn. 36).

³⁵⁸ Cf. H. Denifle–A. Chatelain, *Chartularium Universitatis Parisiensis*, Paris, 1889–97, 4 vols, vol. I, p. 78, n. 20, hereafter abbreviated as CUP; see also G. Leff, *Paris and Oxford Universities in the thirteenth and fourteenth centuries. An Institutional and Intellectual History*, New York: R. E. Krieger, 1975, esp. p. 138: “The books to be lectured on [...] do not give any indication of the state of studies within the different arts subjects save for confirming the predominance of dialectic by 1215. They comprised the New and Old Logic of Aristotle”; O. Weijers–L. Holtz, *L’Enseignement des disciplines à la Faculté des arts (Paris et Oxford, XIII^e–XV^e siècles)*, Turnhout: Brepols, 1997. Since the *Barcelona Compendium*, which lists questions and solutions collected by an anonymous Parisian master, covers all the books of the *Topics*, the CUP prescription which says to read “quantum topichorum” could not refer to the books 1-4 of the Aristotelian *Topics*, as interpreted by Leff, but rather to the four books of Boethius’ *De topicis*

University, the study of logic, and mainly of dialectic, occupied a prominent place, as this is attested to not only by the statutory provisions, but also by the famous *Barcelona Compendium*. In this guide for the bachelors' examination written by an anonymous Parisian master of arts, the Aristotelian *Topics* and *Sophistical Refutations* received the most extensive treatment in comparison to the other Aristotelian writings prescribed in the official *curriculum*.³⁵⁹ The 1252 regulation for students of the English-German nation prescribed the reading of the *logica vetus* and *nova*, the Aristotelian *Topics* were read along with the first three books of Boethius' *De topicis differentiis*: "libros Topicorum Aristotelis et elencorum bis ordinarie, et semel ad minus cursorie, vel si non cursorie, ad minus ter ordinarie". The 1255 statutes of the arts faculty gave the same indication for bachelors.³⁶⁰ In the 1366 syllabus for the Parisian *artistae*, the list of mandatory readings included the first four books of the *Topics*,³⁶¹ and this instruction was confirmed by the 1452 so-called reform of Cardinal Guillaume d'Estouteville.³⁶² Similarly to Paris, in the regulations of many faculty of arts of 15th century universities - both ancient as well as newly founded, Aristotle's *Topics* were lectured on in undergraduate classes. According to Green-Pedersen, all eight books of the *Topics* were read in most of the German Universities, alike Krakow. An exception was Köln, where only books I-II, VI, and VIII were lectured on.³⁶³ In Leuven, according to the 1427 Statutes of the faculty of arts, bachelors had to study "*libri IV Topicorum*". Nonetheless, this prescription did not match with the extant manuscript material originated from the teaching activity, since Leuven commentaries are circumscribed to the first two books.³⁶⁴ At Bologna

differentis, or perhaps to the fourth book alone. This is confirmed by the extant manuscript tradition of Parisian commentaries, which treated the eight books.

³⁵⁹ "The section reserved for the *Topics* - the longest the "Student's Guide" devotes to a particular work - occupies almost fourteen of the ninety-nine columns of this compilation" (Lafleur, "Logic", p. 87).

³⁶⁰ For the 1252 see CUP I, n. 201, p. 228; for 1255 see CUP I, n. 246, p. 277.

³⁶¹ CUP III, n. 1319, p. 145; see also W.J. Courtenay, "The registers of the University of Paris and the Statutes against the Scientia Occamica", in *Vivarium* 31/4 (1991), pp. 13-49.

³⁶² CUP IV, n. 2690, p. 728.

³⁶³ *Statuta Antiqua universitatis Studii Coloniensis de anno 1392*, in F. J. von Bianco, *Die alte Universität Köln und die Späteren Gelehrtschulen dieser Stad*, Köln 1855, Anlage VII, p. 64 and p. 71. The *Statuta Reformata* of 1457 did not modify this disposition.

³⁶⁴ On Leuven statutes see C. Geudens-S. Masolini, "Teaching Aristotle at the Louvain Faculty of Arts, 1425-1500: General Regulations and Handwritten Testimonies", in *Rivista di Filosofia Neo-Scolastica*, 108/4 (2016), pp. 813-844

the 1405 statutes of the university of medicine and arts prescribed that bachelors heard *ordinarie* the first, second, fourth and sixth books of the *Topics*.³⁶⁵ In some 14th-15th century European *Studia*, however, the *Topics* were not part of the mandatory readings. The 1389 statutes of Vienna did not include them. And in the 1420 “*Collectio materiarum pro baccalaureatus gradu*” of Erfurt, written by Master Herbordus de Lippia, the *Topics* were the only work of the *logica nova* excluded from the list. According to the Statutes, in Greifswald (1456), Leipzig (1440, 1483 and 1486) and Uppsala the *Topics* were not among the required books.³⁶⁶

5.1.2 Aristotle’s *Topics* were read in Boethius’ *vulgata* translation, which was the only complete Latin version of this writing available to Medieval authors.³⁶⁷ In the earliest extant 13th century commentaries, it was not uncommon to read the mention of an alternative rendition (*alia translatio*) of the words that the master was commenting upon.³⁶⁸ As experts have acknowledged, Boethius used to revise his translations. And the *Topics* were not immune from this editing process, which resulted in a double recension of the text done by Boethius. It seems therefore probable that the alternatives referred to by the *Topics*’ commentators were not a different version by another translator, but rather amendments of the vulgate

³⁶⁵ C. Malagola, *Statuti delle Università e dei Collegi dello Studio Bolognese*, Bologna: N. Zanichelli, 1888, pp. 251-252. The books of the *Topics*, which were not read ordinarily, could be lectured on *extraordinarie*. A logic teaching program that is very close to the Bolognaise is found in the statutes of Florence.

³⁶⁶ See L. Thorndike, *University Records and Life in the Middle Ages*, New York: Columbia University, 1944, pp. 296-7; A. L. Gabriel, “‘Via antiqua’ and ‘via moderna’ and the Migration of Paris Students and Masters to the German Universities in the Fifteenth Century”, in A. Zimmermann, *Antiqui und Moderni. Traditionsbewußtsein und Fortschrittsbewußtsein im spätern Mittelalter*, Berlin-New York: Walter de Gruyter, 1974, pp. 439-483, esp. pp. 467-9; E. J. Ashworth, “Traditional Logic”, in C. B. Schmitt – Q. Skinner – E. Kessler, *The Cambridge History of Renaissance Philosophy*, Cambridge: Cambridge University Press, 1988, p. 143; on Uppsala see A. Piltz, *Studium Upsalense. Specimens of the Oldest Lecture Notes taken in the Mediaeval University of Uppsala*, Uppsala: Inst. f. Klassiska Språk, 1977, pp. 16-24.

³⁶⁷ In the fifth volume of the *Aristoteles Latinus*, which contains the *Topics*, are edited Boethius’ translation, then a fragment of the *Recensio Altera* (*Topics* IV.2 122a10-b24), which is deemed to be a double recension by Boethius himself, and finally the *Translatio Anonyma*, an anonymous uncomplete translation from 12th century.

³⁶⁸ It seems that Green-Pedersen underestimated this phenomenon; he mentioned only few occurrences of commentators’ references to an *alia translatio*, namely Adenulphus (A.11) and Elias (A.14). We could also add Robertus de Cilnacobi (A.1), Robertus (A.7), Robert Anglicus (A.10) and Walter Burley.

redaction coming from the quill of Boethius himself.³⁶⁹ The existence of a twofold recension is reflected in the manuscript tradition of the *vulgata* of the *Topics*. Indeed usually, alternative readings of the words were added interlinearly by the same hand which wrote the main text, and eventually they became a part of the textual tradition of the treatise. In commenting on the first line of the *Topics* “propositum...est syllogizare”, Robertus de Cilnacobi (A.1) noticed that, insofar as Aristotle had assumed two types of dialectical ratiocination, the alternative rendition ‘ratiocinari’ suited more to the Stagirite’s mind than the Boethian ‘syllogizare’. This *alia translatio*, which is not found neither in the *Recensio altera* nor in the *Translatio Anonyma*,³⁷⁰ is present as an interlinear gloss in the Assisi manuscript 658, which was written at the beginning of 13th century and contained the vulgate Boethian translation of Aristotle’s work.³⁷¹

Interlinear glosses did not only supply synonyms for obscure terms, but also clarifications of more complex syntagms. When comparing these interlinear glosses with the literal exposition of Aristotle’s words, the similarities led to the supposition that master’s elucidations of the literal meaning of the text was mainly grounded on such interlinear glosses, and that they were gradually integrated by those written by the master himself. Either, that masters prepared their course-notes on the translation or students took notes on the translation when in class. An example of

³⁶⁹ H. Chadwick, *Boethius: the consolations of music, logic, theology, and philosophy*, Oxford: Clarendon, 1990, p. 137; J. Marenbon, *Boethius (Great medieval thinkers)*, Oxford: Oxford University Press, 2003, p. 18; L. Minio-Paluello “The Text of Aristotle’s *Topics* and *Elenchi*: the Latin Tradition”, in *The Classical quarterly* N.S.V. 49 (1955), pp. 108-118; *Id.*, “Note sull’Aristotele Latino Medievale: XIII. Traduzioni ‘perdute’ dei Primi Analitici e dei Topici nel codice di Bologna Univ. 4228 del XII secolo”, in *Rivista di filosofia neoscolastica* 52 (1960), pp. 29-45.

³⁷⁰ “S’agit-il d’une troisième traduction, différente de la traduction anonyme du XII^e siècle ? Je ne peux pas répondre à cette question” (Weijers, “Le Commentaire”, pp. 118-119). Weijers raised the problem of the Porphyry referred to by Robertus, who wrote “Hoc etiam consonant Porphyrio exponenti ‘syllogizare’ sic, dicens quod ‘si’ idem est quod ‘cum’ et ‘logos’ ratio, inde syllogizare quasi conratiocinari, et secundum hoc omnis argumentatio syllogismus dici potest” (*ibid.*, p. 128). Clearly, the unknown “Porphyrius” should not be confused with the author of the *Isagoge*. This etymological explanation connected to syllogism is present in the *Ars Burana* and in the *Introductiones Parisienses*, for which see De Rijk, *Logica Modernorum*, pp. 196 and 362.

³⁷¹ It corresponds to the ms. 1266 in the catalogue of the *Aristoteles Latinus*. This manuscript contains translations of the *logica vetus* and *nova*, the *Topics* are at ff. 100r-177v. Along with the ms. Clm 16123 (München, Bayerischestaatsbibliothek, from the end of 12th century), the ms. Conv. Soppr. I.X.25 (Firenze, Biblioteca Nazionale Centrale, 14th century) and the ms. 250 (Charleville, Bibliothèque Municipale, from the beginning of the 13th century), the Assisi manuscript is one of the most important testimonies of the tradition of the Latin translation of the *Topics*, since it contains manifold *aliae lecturae* and is heavily glossed by different hands; it is available online via the website www.internetculturale.it.

the interplay between glosses and literal exegeses is provided by interlinear glosses of a Balliol College manuscript (B) that contains the translation of the *Topics* and Walter Burley's *Notulae super libros Topicorum* (A.29), which follows here:

Aristoteles, intendens dare **artem**³⁷² seu metodium [...] Et est *invenire* **artem** per quam *poterimus sillogizare de omni problemate*, **id est ad omne problema**, ex propositionibus *probabilibus*, **et hoc pertinet ad opponentem**; et per quam poterimus *sustinere disputationem* nullum *repugnans* ipsi posito vel prius concesso concedendo, **et hoc pertinet ad respondentem**.³⁷³ **Ante quam** tamen tradatur **ars** sillogizandi aut respondendi est *dicendum quid est sillogismus et quae eius differentiae* [...] Ordo intentionis est prius determinare de sillogismo et de eius differentiis. **Causa** huius ordinis est ut primo sciatur **quid est sillogismus dialecticus**, **qui** est hic **subiectum** quod primo oportet stabilire.³⁷⁴

But before focusing our attention on the *Doctor planus et perspicuus*, let us turn our attention to the baffling British manuscript tradition of the *Topics*.

5.2 The curious case of the disappeared British manuscript tradition of the *Topics*.

5.2.1 In the Oxford *curriculum studiorum*, logic had the most prominent place. According to the 1268 statutes, the *Topics* were read twice, while the *Posterior Analytics* at least once. The 14th century statutes specified that the *Topics* were

³⁷² Many interlinear glosses have instead *viam* (*brevem*)

³⁷³ *In marg.*

³⁷⁴ Burley's words highlighted in bold coincide with the interlinear glosses, written by an early French hand and, mainly, by a late 13th-beginning 14th Anglican hand; the text of the *Topics* is in italics. The marginal glosses are from the ms. Oxford, Balliol College, ms. (21). 253, ff. 92r-159v, here f. 92v, which was produced in Paris in the third quarter of 13th century; thereafter, I will refer to this ms. as (B). Burley's *Notulae* have been transcribed from the mss. Città del Vaticano, Vat. Lat. 2146, ff. 113ra-204va, here f. 113ra-rb; Cesena, Biblioteca Malatestiana, S. X. 2, ff. 118ra-248va, here f. 118ra; and Oxford, Merton College, ms. 296, ff. 1ra-92va, here f.1ra. I was not able to check the other manuscript preserving Burley's *Notulae*, which is at London, Lambeth Palace, ms. 70, ff. 170ra-268va. Green-Pedersen lists also a fifth manuscript: Wrocław, Biblioteka Uniwersytecka, IV.Q.3, ff. 124r-174v (Green-Pedersen, *The Tradition*, p. 396). This manuscript contains a commentary on the *Topics*, which does not coincide with Burley's *Notulae*. And it cannot be a revised version of the *Notulae*, since the doctrinal content differs from Burley's commentary. A partial transcription of the prologue is provided by Cesalli, "Logique", pp. 313-327.

lectured upon for one term. And the 1409 and 1431 Statutes included the *Topics*.³⁷⁵ Even at Cambridge, Aristotle's treatise was listed among the books that students must have heard before reaching the role of *sophista generalis*. From written records of Cambridge regulations, such as the Old Proctor's Book (1385ca.), we know that the *Topics* were read during the summer term of the first year, along with the books of the *logica vetus*. The 15th century manuscript 466/573, preserved at the Gonville & Caius College, which contained information useful for students, was more precise. Here the *Topics* appeared among the books of the *logica nova* and it was specified that all the eight books were lectured on *ordinarie* at least twice.³⁷⁶

The British residual manuscript traditions, however, do not match completely with the logic programs codified by the statutes. According to Lohr's and Green-Pedersen's catalogues of commentaries on Aristotle's writings, specifically on the *Topics*, only a commentary on this text was surely produced in British universities, namely Burley's *Notulae*, dating from the 1300-1307 and covering the eight books. To this work, could be added: 1) an incomplete commentary (*Topics*, I-beginning IV) compounded of *dubia*, *notanda* and short paraphrases appended, which was wrongly attributed to Bonaventure (A.4) and which Green-Pedersen supposes to have been produced in England around the mid 13th century;³⁷⁷ 2) an anonymous incomplete commentary in form of *sententia* on books I-VI (A.23), which Green-Pedersen hypothesizes to have been produced in England at the very beginning of 14th century;³⁷⁸ 3) a fragment of a text which the manuscript introduced as

³⁷⁵ S. Gibson, *Statuta Antiqua Universitatis Oxoniensis*, Oxford: Clarendon Press, 1931: for the 1268 statutes pp. 26,1-6 and 10-19, p. 27,18-22; for statutes before 1350 pp. 33-35; for the 13 February 1409 statutes, pp. 199,20-201,26; for the 10 December 1431 regulations, pp. 233,35-236,27 and p. 234, 14-27. On Oxford University in the Middle Age see J. I. Catto – R. Evans, *The history of the university of Oxford. Volume II: Late Medieval Oxford*, New York: The Clarendon Press, 1992. On the teaching activity and the *curricula* of the Oxford's Arts Faculty, see: J. M. Fletcher, "The teaching of Arts at Oxford, 1400-1520", in *Paedagogica Historica*, VII,1-2 (1967), pp. 417-454; J. Wheisheipl, "Curriculum of the Faculty of Arts at Oxford", in *Medieval Studies* 26 (1964), pp. 143-85; J. Weisheipl, "Developments in the Arts Curriculum at Oxford in the Early Fourteenth Century", in *Mediaeval Studies* 28 (1966), pp. 151-75.

³⁷⁶ M.B. Hackett, *The Original Statutes of Cambridge University. The text and its history*, Cambridge: Cambridge University Press, 1970, pp. 297-301; D. R. Leader, *A History of the University of Cambridge*, Cambridge: Cambridge University Press, 1988, vol. 1, pp. 89-138.

³⁷⁷ Anonymous [Ps. Bonaventure], Roma, Collegio San Isidoro, 1/10; see Green-Pedersen, *The tradition*, pp. 226, 383-384. I will use the unpublished transcription made at the beginning of 20th century by A. Sirletti.

³⁷⁸ Green-Pedersen, *The tradition*, p. 394.

containing material "*Supra VIII Topicorum*" (A.12), which dealt instead with obligations.³⁷⁹ To Lohr's and Green-Pedersen's list should be added the *Notabilia Scoti in Libros Topicorum*, which consists of elucidations and questions on remarkable issues arising from the eight books of the Aristotelian text. The originally doubted attribution to John Duns Scotus has been accepted by Pini and Marmo, who connected it with Scotus' teaching activity at Oxford, during the 1290s.³⁸⁰ Thus, from the beginning of the 14th century onwards, there are no known or surviving commentaries on Aristotle's *Topics* written in England. A similar perplexing discrepancy between the information drawn from the university statutes, and the extant lectures - which mirror the teaching activity, characterizes also the Italian residual manuscript tradition. According to Lohr and Green-Pedersen, only two manuscripts preserving writings on the *Topics* were produced in Italian Universities. The one is a sentence commentary, written in the first half of 13th century probably at Padua, by the Dominican Gratiadeus de Asculo (A.24). The other is a collection of excerpts drawn from the first two books of the *Topics* compounded by a Bolognese arts master, Iacobus de Placentia (A.25).³⁸¹ As far as I know, then, there are no commentaries on the *Topics* yet identified³⁸² which were produced by 15th century masters teaching in Italian Universities. It is probably not a mere coincidence that this lacuna is common to England and Italy. In England and Italy in the 15th century, the doctrines of the *moderny loyci* had a place of prominence. The *parva logicalia* entered the Paduan and the Bolognese Universities, where professors lectured on

³⁷⁹ Cambridge, Gonville & Caius 344/540, f. 216ra-219rb, from the last decade of 13th century; see Green-Pedersen, *The tradition*, p. 388.

³⁸⁰ Città del Vaticano, Biblioteca Apostolica Vaticana, Vat. Ott. 318, ff. 247ra-296vb, f. 247ra (fol. Antiqua 145ra): "Incipiunt Notabilia Scoti super libro Topicorum Aritotelis"; I will refer to this manuscript, which should be a copy since it presents some *lacunae*; on it see A. Maier, "Ein Beitrag zur Geschichte der italienischen Averroismus im 14. Jahrhundert", in *Quellen und Forschungen aus italienischen Archiven und Bibliotheken* 33 (1944), pp. 136-154; R. Andrews, "The *Notabilia Scoti in Libros Topicorum*: An Assessment of Authenticity", in *Franciscan Studies* 56 (1998), pp. 65-75; G. Pini, "Duns Scotus' Commentary on the *Topics*: new light on his philosophical teaching", in *Archives d'Histoire doctrinale et littéraire du Moyen Âge* 66 (1999), pp. 225-243, esp. pp. 66-67 for the description of the manuscript; C. Marmo, "Scotus on Supposition", in E. P. Bos, *Medieval Supposition Theory Revisited*, Leiden-Boston: Brill, 2013, pp. 233-257.

³⁸¹ Green-Pedersen, *The tradition*, A.24, p. 394 and A.25, p. 395.

³⁸² Green-Pedersen's and Lohr's lists are confirmed by the census done in the *Catalogo di manoscritti filosofici nelle biblioteche italiane*.

texts by English logicians, along with Paul of Venice's *Logica Parva* - which were not always mentioned in the statutes.

5.2.2 The meagre number of commentaries on the Aristotelian writings produced in 13th-15th centuries in Britain was a feature common to all the philosophical areas, although this phenomenon was more accentuated in logic.³⁸³ We could propose some explanations which may account for this puzzling gap. As Leader remarked, many manuscripts containing texts of late 14th-15th century logicians, along with commentaries on the *Organon*, were copied until 1450ca, at which point they continued circulating and were glossed until the end of the century. A case in point is the Lambeth Palace manuscript 70, which contained Burley's *Notulae* together with logical writings from many authors. It was produced in 14th century and then bought by Richard Calne during his study at Oxford (1412-1421ca).³⁸⁴ Similarly, the manuscript 466/573, which was owned by John Hall and is nowadays housed at Gonville and Caius College Library at Cambridge, contained the translations of the entire *Organon* and was "glossed by early anglicana hands".³⁸⁵ According to Thomson's catalogue, on the shelves of Cambridge libraries there are 8 manuscripts containing translations of the *Topics* accompanied by more or less neat marginal glosses, the great majority of which were written by 14th and 15th century Anglican hands, while others in Italian hands.³⁸⁶ In Oxford libraries, there are five manuscripts containing the Latin translation of the *Topics* which were glossed by 14th

³⁸³ Pinborg identified some features common to 13th century English commentaries on Aristotle's *Organon* - all of them in question-form and contained in only six manuscripts - which differ from Parisian commentaries, "although the general character of the problems discussed is much the same". Firstly, English works adopted a terministic language (such as the divisions of *suppositio*) and an extentional approach; then, they were characterized by a higher presence of sophisms and of issues related to *syncategoremata*; finally, they displayed a wider interest in questions about conversion and problems related to the *consequentiae*; see J. Pinborg, "English Logic before Ockham", in *Synthese* 40/1 (1979), pp. 19-42, esp. pp. 31-35; unlike many scholars, Pinborg considered Scouts' logical commentaries to be an outcome of his Parisian activity, *ibid.*, pp. 31-32.

³⁸⁴ On this ms. see N. R. Ker, *Medieval Libraries of Great Britain: A List of Surviving Books*, The Royal Historical Society: London, 1964², pp. 109-111, 273.

³⁸⁵ R. M. Thomson, *Catalogue of Medieval Manuscripts of Latin Commentaries on Aristotle in British Libraries*, Turnhout: Brepols, 2011, vol. 1, n. 35; the *Topics*, until book six, are at ff. 151r-177v.

³⁸⁶ R. M. Thomson, *Catalogue of Medieval Manuscripts of Latin Commentaries on Aristotle in British Libraries*, Turnhout: Brepols, 2013, vol. 2, n. 12; 31; 35; 36; 37; 42; 64; 135. On n. 31 see Ebbesen, "Medieval Latin Glosses", p. 143; on n. 37, *ibid.*, pp. 168 and 171; on n. 64, *ibid.*, p. 132. Unfortunately, I could not see the manuscript.

and 15th century Anglican hands.³⁸⁷ One manuscript of the Boethian *vulgate* contains notes in Italian hand;³⁸⁸ the Bodleian library ms. 520 contains sets of *propositiones* drawn from the *Topics*.³⁸⁹ While the manuscript 57 Fragm. 20-21 of the Brasenose College library, which dates from beginning 14th century, includes some unidentified questions on *Topics* VII.5 and VIII.3-10.³⁹⁰ As was customary for translations, many of the Oxford manuscript containing annotated *vulgatae* of the *Topics* were accompanied by interlinear glosses. Some of them were written by the hand of the scribe himself and offered literal explanations of words or subdivisions of the text. The layout of the folia was organized for receiving scholia, since the large lateral margins were factory-divided in columns, which were then filled with glosses. Usually, these marginal glosses sketched the content of the corresponding section of the text or added some remarks on it.³⁹¹

An example of an interesting marginal *notandum* is found at the beginning of the third book of the *Topics*, corresponding to the first topic, where Aristotle mentioned the prudent man (*prudens*).³⁹² In an Oxford manuscript containing Boethius' translation of the text, which was used as pastedown, we find a continuous marginal gloss written by an Anglican hand (perhaps of the mid-14th century), which expounded on the division of ethics. The same explanation of the Aristotelian word appeared in a marginal scholium of (B). None of the 10 Continental manuscripts containing the *vulgata* of the *Topics* which I have scrutinized, have a similar marginal note. A slightly different account is found in A.4, while Burley's explanation coincides *verbatim* with the glosses.³⁹³ Among the Parisian masters considered in previous chapters, only Adenulphus proposed a similar explanation (A.11).³⁹⁴

³⁸⁷ Thomson, *Catalogue*, vol. 1, n. 211, 251 (which covers *Top.* VIII.8-11); 278; 352 (*Top.* VIII.12); 389 (*Top.* II.8-III.1; IV.4; it was used as pastedown).

³⁸⁸ Thomson, *Catalogue*, vol. 1, n. 21.

³⁸⁹ Thomson, *Catalogue*, vol. 1, n. 16; it was produced in England in 15th century.

³⁹⁰ Thomson, *Catalogue*, vol. 1, n. 221.

³⁹¹ For the various layouts and types of scholia see Ebbesen, "Medieval Latin Glosses".

³⁹² Aristotle, *Topics*, III.1, 116a14 (*AL*, p. 50,14).

³⁹³ The exemplar from which were copied the marginal glosses of ms. Pr. Bk. Cpbd. A.4.12 and ms. 253 is probably the manuscript of the *Notulae*, preserved at Merton College, ms. 296, f. 31ra.

³⁹⁴ "Aliter dicendum quod eligibile <est> circa moralia sed moralis est triplex, yconomica, monastica et politica. Per hoc quod dicit *prudens* tangit yconomicam, quia prudens dicitur qui bene sit se habere inter socios et propriam familiam et hoc considerat yconomica. Per hoc quod dicit *bonus* tangit monasticam quia bonus dicitur qui bene sit se ipsum regere et propria virtutem, et hoc considerat

Pseudo- Bonaventure (A.4), f. 121	Burley, <i>Notulae</i>	St. John College, Pr. Bk. Cpbd. A.4.12, left margin ³⁹⁵	Balliol College, m. 253, f. 109v, bottom margin
---	------------------------	--	---

In electione ista tangit <scientiam> philosophiae moralis	Notandum quod Philosophus in isto textu tangit scientiam moralem triplicem.	Notandum quod Philosophus in isto textu tangit scientiam moralem triplicem
---	--	--

Per hoc quod dicit vir <i>prudens</i> tangit etiam yconomicam.	Per hoc enim quod dicit vir <i>prudens</i> tangit illam partem ³⁹⁶ moralis philosophiae quae dicitur yconomica.	Sciendum quod <per hoc quod> dicit vir <i>prudens</i> <tangit ill>am partem moralis <philosophiae qua>e dicitur yconomica.	Per hoc enim quod dicit vir <i>prudens</i> tangit illam partem moralis philosophiae quae dicitur yconomica.
---	---	---	--

Prudens enim dicitur ille qui scit disponere familiae propriae subditis.	Prudens enim dicitur ille qui bene scit disponere familiae proprie et sibi subditis et	<Prudens> enim dicitur ille qui scit> disponere fami<liae proprie> et sibi subditis talis dicitur	Prudens enim dicitur ille qui bene scit disponere familiae proprie et sibi subditis et talis
---	---	--	---

monastica. Per hoc quod dicit *lex* tangit politica quia lex docet regere proprios et civitates et hoc considerat politica" (A.11, f. 61vb).

³⁹⁵ The words between "greater" and "lesser than" were cut when the page was trimmed.

³⁹⁶ Scientiae *add. C*

talīs dicitur yconomicus sive < dicitur yconomus
 yconomus seu dispensator. seu dispensator.
 dispensator.³⁹⁷

Per hoc quod dicit *vir bonus* tangit monasticam.
 Et per hoc quod dicit *bonus* tangit illam partem moralis philosophiae quae dicitur monastica[sic] seu ethica³⁹⁸.
 Per hoc quod dicit <bon>us tangit illam <partem> moralis philosophiae quae <dicitur m>onostica[sic].
 Et per hoc quod dicit *bonus* tangit illam partem moralis philosophiae quae dicitur monastica seu ethica.

Bonus enim dicitur qui bene est dispositus in anima penes se.
 Bonus enim dicitur³⁹⁹ qui est bene dispositus secundum animam et secundum seipsum.
 Bonus enim dicitur <qui>cumque est bene dispositus.
 Bonus enim dicitur qui est bene dispositus secundum animam et secundum seipsum.

Per hoc quod dicit *lex recta* intelligit politicam.
 Et per hoc⁴⁰⁰ quod dicit *lex recta* tangit illam partem moralis philosophiae⁴⁰¹ quae dicitur politica.
 <Et> per hoc quod dicit *lex* <recta> dat intelligere istam partem quae dicitur politica. Politicus est ille qui consistit in
 Et per hoc quod dicit *lex recta* tangit illam partem moralis philosophiae quae dicitur politica

³⁹⁷ Domus add. C

³⁹⁸ Ethica om. V

³⁹⁹ Ille add. C

⁴⁰⁰ Per hoc] secundum quod C

⁴⁰¹ Moralis philosophiae] philosophiae morale C

politica	quae	regimine	rei	quae	consistit	in
consistit ⁴⁰²	in	publicae.		regimine	rei	
regimine	rei			publicae		
publicae.						

All the folia of B containing the translation of the *Topics* present marginal scholia, which were written by different hands. A same Anglican hand, from around the beginning of 14th century, wrote the glosses that were drawn from Burley's commentary. Considering these data and since it is likely that Burley gained his bachelor's degree from Balliol College, where he was a Fellow from about 1295 to 1301, we could suppose that the marginal glosses were records taken from Burley himself when he was a student. We could also conjecture that these glosses were students' notes, taken during Burley's lectures at Merton College (1301ca.-1307ca.), or that they were directly drawn from the copy of the *Notulae*, preserved in the Merton manuscript. In turn, Burley's commentary bore many resemblances, often literally, to Scotus' *Notabilia*. Although he never mentioned Scotus, plausibly Burley borrowed some material from his text.⁴⁰³

5.3 Scotus and Burley: an independent English tradition?

Pini and Marmo have provided convincing arguments in favour of the attribution of the *Notabilia super Topicorum*, found in a Vatican manuscript, to John Duns Scotus. Probably, this commentary was connected with his lectorate at the Oxford Franciscan house, during the 1290s. Walter Burley's *Notulae* came soon thereafter, plausibly when he was the master of Art at Merton College, in the first decade of 14th century, and before he moved to Paris around 1307. When leafing through the folia of Scotus' and Burley's *Topics* commentaries, their striking literal and doctrinal similarities stand out. So much so, that one gets the impression that Burley wrote his

⁴⁰² Consistit] resistit V

⁴⁰³ If this text will turn out to not be by the pen of Scouts, the eventual author would be the source of Burley, if prior to him. Otherwise, Burley would be the source for the *Notabilia Scoti*.

work with Scotus' *Notabilia* at his elbow, at times copying entire sections, and at other times reshaping or eliminating some passages.⁴⁰⁴ Despite the affinity in content, the two writings differ for their formal arrangement, since Scotus provided only the *notabilia* and *dubia*, while Burley added the preliminary *divisio textus* and the *sententia*. This partially justifies the verbosity of the *Notulae*, along with the didactical scope of the work. In order to make Aristotle's text as intelligible and clear as possible for his student, Burley fleshed out his explanation with extended examples, some of which he borrowed from natural philosophy.⁴⁰⁵

The evidence adduced by Pini and Marmo for establishing the authorship of the *Notabilia* consisted in sixteen quotations of his own commentaries on Aristotle and Porphyry, made by the author of the *Notabilia*— e.g. “cuius causa assignatur super Porphyrium”, “de hoc diffusius dictum est in *Praedicamentis*”. The comparison which Pini and Marmo have highlighted between these self-references and the corresponding passages in Scotus' authentic works, has shown a doctrinal affinity between the author of the *Notabilia* and Scotus.⁴⁰⁶ By likening the *Notabilias'* references of the Aristotelian and Porphyryan writings to the quotations found in the *Notulae*, it has emerged that from time to time Burley sided with Scotus in mentioning some Aristotelian works. Other times, he cited different texts.⁴⁰⁷ Unlike Scotus, the *Doctor Planuus and Perspicuus* was less self-referential. He mentioned only his own commentary on the *Categories*. This might be justified by the fact that Burley

⁴⁰⁴ That Burley was acquainted with Scotus and with his literary production is confirmed by Burley himself as well as by textual evidence. In the last version of his commentary on the *Physics* Burley wrote “audivi in juventute mea a quodam subtilissimo doctore”, although it is more likely that this claim should be referred to his Parisian period. Moreover, Burley's heavy dependence on Scotus is attested by some of his writings, e.g. his *Quaestiones libri Elenchorum*; see A. Uña Juárez, *La filosofía del siglo XIV: context cultural de Walter Burley*, San Lorenzo del Escorial: Biblioteca “La ciudad de Dios”, 1978, esp. p. 21; M. Von Perger, “*Quaestiones libri Elenchorum: Quaestiones XVIII de fallaciis, quae 'in dictione' nuncupantur* Qq. 1-3, 13-18”, in *Chaiers de l'Institut du Moyen-Âge Grec et Latin* 76 (2005), pp. 159-237, esp. p. 164.

⁴⁰⁵ For example, the transcription of Burley's commentary on the second book of the *Topics* extends to 79 pages, while Scotus' to less than the one-half, namely 31 pages. In commenting *Topics*, I.11, 104b23, “omnia moventur secundum Eraclitum”, Burley expounded on bodies' simple and mixed motion along an entire column.

⁴⁰⁶ The complete list is provided by Marmo, “Scotus' commentary”, pp. 168-170. In presenting the parallel passages, I will follow Pini's account, “Duns Scotus”.

⁴⁰⁷ Burley mentioned almost the entire Aristotelian *corpus*: *Categories*, *On Interpretation*, *Prior and Posterior Analytics*, *Sophistical Refutations*, *Physics*, *On the Heavens*, *On Generation and Corruption*, *Metaphysics*, *On the Soul*, *Nicomachean Ethics*. He also mentioned Grossetestes' commentary on the *Posterior Analytics* and Averroes.

had not yet written his commentaries on the other works he mentioned, when he was lecturing on the *Topics*.

In the first book of the *Topics*, Aristotle had defined the four predicables, namely genus, definition, accident and property. “A property” (*proprium*,) he said, “is something which does not indicate the essence of a thing but yet belongs to that thing alone, and is predicated convertibly of it.”⁴⁰⁸ In his *Isagoge*, Porphyry had sketched four senses of property, the fourth of which defined convertible property as what is an accident of a certain species alone, and of all of it and always.⁴⁰⁹ Scotus had reckoned the identity between the Aristotelian and Porphyryan definitions, but did not offer a complete explanation for his claim, deferring it to his commentary on the *Isagoge*. Burley quoted Porphyry without however referring to his own commentary on it:

Scotus, <i>Notabilia</i>	Burley, <i>Notulae</i>
f. 249ra-b: <i>Proprium est quod non indicat quid est esse et conversim praedicatur de re.</i> ⁴¹⁰	C 124ra, V116rb: <i>Proprium autem est.</i> ⁴¹¹ Haec est secunda particula secundae partis in qua determinatur de proprio secundum suam substantiam et quidditatem. Et primo describit <i>proprium</i> , secundo removet quaedam a ratione proprii, quae alicui possent videri esse propria, quae tamen non sunt propria.
Praedicatum convertibile non essenziale, et ista <est> definitio. Ubi ‘praedicatum’ est genus per aliqua duo differentia, reliqua duo sunt sicut <differentiae> appropriantes hoc genus huic speciei. Et haec definitio est eadem in re definitioni Porphyrii, ut dictum	Describendo ergo <i>proprium</i> dicit quod <i>proprium est quod non indicat quid est esse, soli autem inest et conversim de re praedicatur</i> , idest <i>proprium est praedicatum convertibile cum specie non essenziale</i> . Et

⁴⁰⁸ Aristotle, *Topics*, I.5, 102a18-19.

⁴⁰⁹ Porphyry, *Isagoge*, 4,17-18 (Engl. tr. in Barnes, *Introduction*, pp. 11-12).

⁴¹⁰ *AL, Topica*, bk. 1, ch. 5, p. 10, l. 1 (102a18).

⁴¹¹ *AL, Topica*, bk. 1, ch. 5, p. 10, l. 1 (102a18).

<p>est ibi in capitulo de proprio [<i>scil. Scoti Super universalis Porphyrii</i>, q. 3].</p> <p>Aliquid autem est proprium secundum quid aliquando, ut hominem sedere. Vel in comparatione ad quid, puta hominem esse bipedem in comparatione ad equum.</p>	<p>sciendum est quod proprium, ut hic accipitur, idem est quod proprium proprissime acceptum quomodo accipitur in libro Porphyrii in quarto modo proprii. Exempla ponit Philosophus et patent.</p> <p><i>Nemo enim proprium.</i>⁴¹² Hic removet quaedam a ratione proprii, quae possent alicui videri esse propria, scilicet proprium quando et proprium ad aliquid. Verbi gratia: proprium quando est illud quod inest omni et soli pro determinato tempore, ut posito quod omnis homo et solus homo sedeatur nunc, et sic sedere est proprium homini quando hoc est pro determinato tempore. Proprium ad aliquid est illud quod inest omni contento sub una specie et nulli contento sub alia specie et illud est proprium ad aliquid illi speciei cui inest in comparatione ad speciem cui non inest; et sic bipes dicitur proprium hominis in comparatione ad equum. Sed huiusmodi propria, scilicet proprium quando et proprium ad aliquid, non sunt vere propria quia non predicantur convertibiliter de rebus quibus istis modis dicuntur propria.</p>
---	--

Subsequently, Aristotle defined genus as “what is predicated in what a thing is of a number of things exhibiting differences in kind”.⁴¹³ In commenting this passage, Scotus coped with the question whether the genus was a *res* or an *intentio* and

⁴¹² *AL, Topica*, bk. 1, ch. 5, p. 10, l. 5 (102a22).

⁴¹³ Aristotle, *Topics*, I.5, 102a31-32 (in Barnes, *Complete Works*, vol. 1, p. 170).

pushed the solution back to his commentary on Porphyry. Here, he had explained that the Aristotelian definition of genus applied to intentions. In the parallel passage, Burley did not hint at the problematic issue concerning the referent of the definition of genus and having eluded this question, he could also drop any reference to intentions:

Scotus, <i>Notabilia</i>	Burley, <i>Notulae</i>
f. 249rb: <i>Genus est quod praedicatur de pluribus.</i> ⁴¹⁴ Cuius sit haec definitio, rei scilicet vel intentionis, et quomodo sit intelligenda, dictum est super Porphyrium [<i>scil. Scoti Super universalis Porphyrii</i> , q. 14.]	C124ra, V116rb: <i>Genus autem est.</i> ⁴¹⁵ Haec est tertia particula secundae partis in qua Philosophus determinat de genere secundum suam substantiam et quidditatem. Et primo describit genus, secundo determinat de generali, quod est quoddam reducibile ad genus. Descriptio generis quam ponit et explanat manifesta est in textu.

In commenting on Aristotle's doubt as to whether particular instances of the general question "of which of the two <things> is the predicate more properly an accident?" belonged to the topic of accident or of property, Scotus considered these two predicables as intentions applied to things of first intention taken concretely ("illae intentiones insunt rebus primae intentionis significatis in concreto"). And invited the reader to go through his commentary on Porphyry for a better understanding of the issue. Similarly to the previous case, on this occasion too Burley avoided the reference to the *Isagoge* as well as the use of intentionalistic terminology.⁴¹⁶

At the end of the first book, in a passage concerning the second instrument for dialectical inquires, namely the scrutiny of the ways in which a term was employed, Aristotle gave two pieces of advice. Firstly, to consider whether two items having the same name belonged to different genera not subordinated to each other.

⁴¹⁴AL, *Topica*, bk. 1, ch. 5, p. 10, l. 14 (102a32).

⁴¹⁵AL, *Topica*, bk. 1, ch. 5, p. 10, l. 14 (102a32).

⁴¹⁶Aristotle, *Topics*, I.6, 102b14-21; Scotus, *Notabilia*, f. 249va; Burley, *Notulae*, V116va-vb.

Secondly, to inquire if the contrary of the term being scrutinized applied to items which fell under different genera not subordinated.⁴¹⁷ Scotus and Burley explained these prescriptions by referring to the principle found in the *Categories* according to which “the differentiae of genera which are different and not subordinate one to the other are themselves different in kind”:⁴¹⁸

Scotus, <i>Notabilia</i>	Burley, <i>Notulae</i>
f. 253ra: Causa utriusque considerationum est quia <i>diversorum generum et non subalternatim positorum sive generalissimorum sive non</i> , etc; cuius causa dicta est in Praedicamentis [scil. <i>Super Praedicamenta</i> , q. 10.]	C136rb, V124vb: <i>Considerare autem et genera.</i> ⁴¹⁹ Secunda consideratio est: si propositum sit in diversis generibus non subalternis, idest quorum neutrum ponitur sub alio nec ambo sub tertio, propositum est aequivocum; et ponit exempla, quae patent. Causa utriusque considerationis est quia <i>diversorum generum et non subalternatim positorum, sive generalissimorum sive non, diversae sunt differentiae et species, ut dictum est in Praedicamentis</i> ⁴²⁰ ubi posita sunt instantiae et solutae.

Burley also followed in the footsteps of Scotus in commenting on a topic of genus, which prescribed to investigate “whether the species and the genus fail[ed] to be used in relation to an equal number of things”.⁴²¹ This instruction invited the two commentators to ascertain whether the category of relation was itself relative or not. Both authors referred to the answers which they had given in their respective commentaries on the *Categories*. Nevertheless, Burley was more generous than

⁴¹⁷ Aristotle, *Topics*, I.15, 107a18-19 and 107a32-33.

⁴¹⁸ Aristotle, *Categories* 3, 1b16-17 (in Barnes, *Complete Works*, vol. 1, p. 4).

⁴¹⁹ *AL, Topica*, bk. 1, ch. 15, p. 25, l.3 (107a19).

⁴²⁰ G. Burley, *Tractatus super Praedicamentorum*, ed. by A. Conti, pp. 21-23, available online at: http://www-static.cc.univaq.it/diri/lettere/docenti/conti/Allegati/WB_praedicamenta.pdf.

⁴²¹ Aristotle, *Topics*, IV.4, 124b15 (in Barnes, *Complete Works*, vol. 1, p. 210).

Scotus. He provided the reader with a detailed response in which he explained that the category of relation was the *principium referendi* in virtue of which relative things were said to be relative to each other:

Scotus, <i>Notabilia</i>	Burley, <i>Notulae</i>
<p>f. 272rab: Multa circa hanc materiam prolixius dicta sunt <in> libro <i>Praedicamentorum</i>, capitulo de relatione: quomodo generalissimum relationis est relatio et denominative dicto ab illo est relativum etc., et cui referatur, et de multis aliis quae hic perlongum est recapitulare. [cf. <i>Super praed.</i>, q. 25.]</p>	<p>C177va: <i>Si autem sit ad aliquid.</i>⁴²² Sed adhuc dubitatur quia non sequitur species est ad aliquid, ergo genus est ad aliquid [...] Dicendum quod generalissimum in praedicamento relationis non refertur, sed est principium referendi. Nec aliqua per se species in genere relationis per se refertur, sed est illud quo aliud refertur. Unde hoc nomen relatio est nomen generalissimum in praedicamento relationis et relatio, quae est genus generalissimum, est principium referendi hoc commune relativum ad suum correlatum. Unde si a. sit genus generalissimum in genere relationis et b. suum correlatum, eadem est relatio ipsius a. ad b. et e converso, et ideo non sequitur quod sint duo genera generalissima in praedicamento relationis, ut dictum est in libro <i>Praedicamentorum</i> capitulo de relatione.⁴²³</p>

⁴²² *AL*, *Topica*, bk. 6, ch. 4, p. 75, l. 11.

⁴²³ Burley, *Praedicamentorum*, pp. 60-66.

5.3.1 Innumerable similar parallel passages of these two texts could be brought as evidence for their close resemblance, which is confirmed also by the same approach to the *Topics* in the two works and by their doctrinal affinities. Moreover, the writings of the two English masters were characterized by unique features, which were absent from Parisian commentaries. This lets us suppose that the *Topics* commentaries of Scotus and Burley did not belong to the continental exegetical tradition. The contextual approach displayed in the *Notabilia* and in the *Notulae*, which was characteristic of terminism, had been replaced by the modistic semantic in Parisian commentaries of that period. In Scotus' and Burley's analyses a central role was assigned to the doctrine of the *suppositio* in order to establish eventual restrictions to the applicability of the *considerationes*.⁴²⁴ "While completely absent from the Parisian tradition, the position which holds that the predicate of a universal affirmative proposition has *suppositio confusa tantum* is typical of the English development of supposition theory [*scil.* e.g. William of Sherwood and Roger Bacon], and Scotus' use of it confirms his close connection with this tradition".⁴²⁵ This affirmation holds true for Burley too. The differences between the *Notabilia* and the *Notulae* on the one hand, and the commentaries which had been produced in Paris on the other hand, emerges from the very first folia. As we have seen in the preceding chapter, Parisian commentaries spanning from the end of the 13th to the beginning of the 14th century focused on general topics rather than on specific logical issues. The two English masters, instead, neither coped with general questions about logic and dialectic nor inquired about their scientific status and subdivisions or on their relationships with other disciplines. And Scotus spent a mere few lines stating that dialectic was inventive, since it aimed at finding the middle term of dialectical syllogism, Burley did not touch upon this topic. None of the English masters elucidated upon the meaning of *methodus*, on which almost all Parisian commentators had offered the traditional etymological explanation as "*brevis via quae [...] vulgariter semita vocatur*". Nor was this explication found in the scholia, written by Anglican hands, which accompanied the Boethian translation of the

⁴²⁴ "Scotus' theory of supposition is clearly linked to the English tradition: *suppositio* is therefore a property that terms have only when they occur in propositions" (C. Marmo, "Scotus on supposition", p. 255).

⁴²⁵ Marmo, "Scotus on supposition", p. 244.

Topics. All the problems related to the definition of syllogism - on which generations of Parisian masters had struggled, passed unnoticed by Scotus and Burley. They merely paraphrased the Aristotelian *littera*, without raising any question. Burley, then, offered a gnoseological elucidation of *probabilia*, which bore resemblance with that provided by Pseudo-Bonaventure (A.4) as well as with the subjective interpretation of probability proposed by Elias, the anonymous A9 and Robert de Cilnacoby (A.1). But the most remarkable difference between the two English masters and their Parisian colleagues lay in their treatment of the topics expounded in the central books of the *Topics*. Consistent with their disinterest in metalogical issues, the two English masters did not treat the question about the nature of the *locus* and what it was. One would look in vain for a definition of *locus* in Scotus' and Burley's commentaries, who seemed to be unaware of the usual definition of *locus* as *habitus terminorum* that appeared in almost all the 13th century Parisian commentaries. Only Scotus mentioned, *en passant*, the *locus dyalecticus*: "*locus dyalecticus est in consequentia concedenti praemissam et omnes isti loci ponuntur principaliter pro evidentia alicuius consequente*".⁴²⁶ Generally, both Scotus and even more so Burley acknowledged a marginal if not symbolic role to the Boethian topics. The *Doctor planus et perspicuus* viewed the topics listed by Aristotle as necessary rules for discovering the middle of dialectical syllogism:

Considerationes vero in hoc libro [*scil. in Topicis*] per quas invenitur medium ad terminandum problemata sunt ita necessariae quod numquam possunt deficere [...] illa quae docentur hic [*scil. in Topicis*] non possunt necessario doceri, sed hoc est quia multae regulae dandae ad inventionem medii syllogismi dialectici sunt ita manifestae quod non potest de eis subtilis ratio faciliter assignari, sed tantum possunt exemplariter ostendi. Aliae tamen regulae, quae non sunt ita manifestae, possunt per priora declarari.⁴²⁷

In the central books of his commentary, Burley applied the topical rules to various consequences in order to understand whether and under what respect these rules

⁴²⁶ Scotus, *Notabilia*, f. 262rb.

⁴²⁷ Burley, *Notulae*, bk. I, C121rb, V114va-vb.

held and could be inferences licenses. And in carrying out this scrutiny, he adopted the necessary-truth preservation as criterion of the validity of consequences: in a *bona consequentia* a false consequent cannot follow from a true antecedent.⁴²⁸ Thus, Burley implicitly equated topical precepts, and specifically the maximal proposition, to the rules for consequences, of which he had given a list in his *Treatise on Consequences*, written before 1302. Indeed many topical prescriptions coincided with the rules for inferences, as can be seen in the case of the topic from contradictory opposite and of the rule concerning contradictory propositions:

<i>Notulae Topicorum</i> , C f.151ra, II.8 113b15, <i>Quoniam autem oppositiones</i>	<i>Tractatus de Consequentis</i> , p. 137, n. 105
<Consideratio> si velis videre utrum ad antecedens aliquod sequatur consequens, videas utrum ex contradictorio consequentis sequatur contradictorium antecedentis. Et si sic, tunc ad antecedens sequitur consequens et per consequens constructum est problema; si non, destructum est problema.	
Maxima: in contradictoriis tenet consequentia e contrario, hoc est ex contradictorio consequentis sequitur contradictorium antecedentis. Et iste locus tenet constructive et destructive.	Regula est: in contradictoriis tenet consequentia e contrario. Et consequentia tenet e contrario quando ad oppositum consequentis sequitur oppositum antecedentis, sicut ad antecedens sequitur consequens.

⁴²⁸ Scotus also adopted the necessary truth-preservation criterion. Nevertheless, while discussing the invalidity of a specific consequence, Scotus seemed to endorse the containment criterion. He claimed that the inference was not valid since the consequent was not understood in the antecedent, therefore the antecedent could not be considered the cause of the truth of the consequent: in a valid consequence, indeed, the “consequens est de intellectu antecedentis, ergo antecedens est causa veritatis consequentis” (Scotus, *Notabilia*, f. 257ra, 258vb). In commenting on the same passage, Burley did not hint at the containment criterion.

<p><Example:> quia animal sequitur ad hominem, hoc est quia ista propositio 'animal est' sequitur ad illam 'homo est', ideo 'non homo' sequitur ad 'non animal', hoc est illa propositio 'non homo est', sequitur ad illam 'non animal est' accipiendo ly non utrobique ut est negatio pure negans et non sequitur e contrario, non enim sequitur non homo, ergo non animal est.</p>	<p>Verbi gratia: ad 'hominem esse' sequitur 'animal esse' ita ad 'nullum animal esse' sequitur 'nullum hominem esse.'</p>
<p><Notandum;> Circa hanc considerationem est intelligendum quod potest consideratio ista accipi dupliciter, scilicet vel contradictione quae est inter propositiones, inter quas est proprie et primo consequentia, vel potest intelligi de contradictione terminorum ratione quorum est consequentia inter propositiones. Si intelligatur primo modo non est aliqua dubitatio quin semper ex contradictorio consequentis sequitur contradictorium antecedentis, sed non semper ex contradictorio antecedentis sequitur contradictorium consequentis [...] Intellectus illius considerationis ipsius Philosophi est de contradictoriis quantum ad consequentiam, non quantum ad praedicationem.</p>	

5.3.2 Thus, the Boethian tradition of the *Topics* hardly found room in the *Notabilia* and in the *Notulae*. Both Burley and Scotus dealt with the various topics presented

by Aristotle, and especially those of the second book, in light of the theory of consequences, unlike their Parisian colleagues. Let us consider how Parisian and English masters approached two logical rules exposed in the second book of the *Topics*. Here, Aristotle had proposed two topical rules applicable to propositions, which amounted to the *modus ponens* and *modus tollens*:

Look and see in regard to the thing in question, what is such that if it is the case the thing in question is the case, or what is necessarily the case if the thing in question is the case: if you wish to establish a view inquiry what there is, such that if it is the case the thing in question will be the case (for if the former be proved to hold, then the thing in question will also have been proven to hold); while if you want to overthrow a view, ask what it is that is the case if the thing in question is the case (for if we show that what follows from the thing in question is not the case, we shall have demolished the thing in question.⁴²⁹

Robert (A.7) analysed this topic in relation to syllogism, and did not deem it to provide a general logical rule, but a mere dialectical prescription:

Consequens dicitur de 'cum' et de 'sequens' cum vero idem est quod simul sequens est posterius quare consequens est, simul et est posterius. Sicut aliquis potest esse simul tempore cum aliquo et indivisum ab eo secundum tempore, tamen posterius est secundum naturam et essentia, sicut risibile simul tempore est cum homine et posterius est illo secundum naturam et hoc consequens est accidentale. In huiusmodi ergo consequens docet hic ac inspicere quod est simul cum aliquo tempore, posterius vero illo secundum naturam. Sic sumitur consequens hic. Et sic sumendo antecedens et consequens, manifestum est quod non omne medium est antecedens vel consequens et sic patet quod haec consideratio non est communis ad omnes alias considerationes. Item patet quod non sumitur eodem modo antecedens et consequens et extremum hic et in *Prioribus*, quia in *Prioribus* sumuntur magis communiter hic vero minus communiter. Item antecedens et consequens prout sumuntur in *Prioribus* sunt

⁴²⁹ Aristotle, *Topics*, II.4, 111b7-23 (in Barnes, Complete works, vol. 1, p. 186).

dispositiones medii in comparatione ad extremitates, prout autem hic sumuntur sunt dispositiones medii in comparationem ad conclusionem.⁴³⁰

Robert de Cilnacobi (A.1) treated it as a topic from the genus and from the species and did not devote any of the five questions concerning the entire *particula* to this consideratio.⁴³¹ Similarly, Albert the Great too dealt with the *modus ponens* and *modus tollens* in connection with the topic from the genus and from the species. The *modus tollens* could be used only for denying something, just as with the topic from the genus. Similarly, the *modus ponens* had only an affirming function, just as the topic from the species:

Si illud antecedens ostendatur esse, etiam propositum consequens erit; quia ab antecedente ad consequens proceditur affirmando sicut a specie ad genus [...] si ostenderemus illud non esse, quod est consequens proposito antecedenti, sequitur etiam quod non erit, et interimentes erimus propositum antecedens; proceditur enim a superiori ad inferius negando.⁴³²

Boethius of Dacia and Radulphus Brito did not devote any specific question to this topic, while Simon of Faversham merely paraphrased Aristotle's text without adding any remark:

Considerandum est in antecedente, si velis construere propositum [...] posito enim antecedente necessarium est propositum, nam si antecedens ostendatur esse, tunc et consequens. Ut ostenso quod homo sit substantia, ostensum est quod animal sit substantia. Destructive considerandum est ad consequens, ut si antecedens est, tunc erit consequens quia si ostenderemus consequens non inesse, tunc distruxerimus propositum.⁴³³

⁴³⁰ A.7, f. 42 vb. A.10 employed the same approach, although he expressed it in few lines: cf. ff. 193ra-194va.

⁴³¹ A.1, f. 107a.

⁴³² A.2, p. 306b.

⁴³³ A.18, f. 32va.

Pseudo-Bonaventure (A.4) adopted a completely different approach to the topics and brought the consequences into picture. He raised an objection against each rule and in his answer he pointed out that these rules worked in a sentential framework, while they were not always valid in a predicative context – which was the context in which the counter-instances developed:

Contra primam partem considerationis videtur instantia: quod sequitur, “si sex, ergo quatuor”, non tamen si construatur sex esse, sex construetur sex esse quatuor; et ita antecedens construetur de aliquo, de quo non consequens. Contra secundam partem sic. Quinque sequitur ad sex, non tamen si quinque removentur a sex, sequitur quod sex removetur a sex. Et dicendum quod consideratio vult, quod ‘si antecedens sit, et consequens’; et non <vult quod> ‘de quocumque praedicatur antecedens, <et consequens>’. Et hoc patet inspiciendo literam Aristotelis.⁴³⁴

Scotus and Burley followed in the footsteps of Pseudo-Bonaventure in their extensive treatment of these *loci*. The two English masters introduced these topics as topics “from the antecedent” and “from the consequent” respectively, whose maxims were a) “once the antecedent is posited, also the consequent is posited” and b) “once the consequent is denied, the antecedent is denied”.⁴³⁵ Then they raised some objections against the validity of these rules. One such objection consisted in a counter-instance to b) which runs as follows.

Let us take ‘four’ (*r*) and ‘six’ (*s*). Rule a) is valid: *r* follows from *s*, that is ‘*s* is, therefore *r* is’. Both authors left implicit that a) was valid in virtue of the topic from an integral whole to its part, since the relation holding between *s* and *r* was that of an integral whole to its part. In his *Summulae Dialecticas*, Roger Bacon had explained that the downward argumentation (from whole to part) was valid only affirmatively in virtue of the maximal proposition “if the integral whole is, its part is”, while the argumentation from the part to the whole was valid only destructively, “if the integral part is not, nor the whole is”. And unlike Peter of Spain, he had specified

⁴³⁴ A.4, p. 92.

⁴³⁵ Cf. W. Burley, *De Consequentibus*, ed. by N. J. Green-Pedersen, “Walter Burley’s *De Consequentibus*. An Edition”, in *Franciscan Studies* 40 (1980), pp. 102-166, here p. 133, n. 89.

that these maxims were valid omnitemporally only when the part and the whole were compared to each other in relation to existence.⁴³⁶

Rule b), however, is not valid: it did not follow '*r* is not, therefore *s* is not'. For example: take the subject terms *r* and *s*, and the predicate *p* 'to be greater than five', and the inference '*s* is *p*; therefore, *r* is *p*'. If b) was valid, then '*r* is not *p*; therefore, *s* is not *p*' followed. But since in this case the negation of the consequent '*r* is not *p*' did not imply the negation of the antecedent '*s* is not *p*' – six indeed is greater than five! –, then b) did not hold. And, Scotus remarked, the topic from the whole to its part functioned in a similar fashion: it could not be applied in arguments in which the predicate inhered in either the whole or the part.

The general pattern of Burley's and Scotus' answers coincided. They rejected the objection since it missed the target, being concerned with predication. In fact, it was directed against the relation between terms, while the rules a) and b) concerned the logical connection between sentences. The two English masters agreed that properly speaking the term consequence "est inter propositiones", and Burley added that "inter terminos non est consequentia proprie".

Within a propositional frame, b) was valid omnitemporally. In fact, the impossibility for the consequent to be false being that the antecedent is true ("antecedens non potest esse verum sine consequente")⁴³⁷ was a basic rule for simple consequences, which were grounded on the assumption that "ex vero numquam sequitur falsum". However, if b) was applied to terms, then its validity was not absolute. The two English masters pointed out that a consequence could hold in virtue of its terms in two different ways. And in specifying this, Burley introduced an elaborate distinction between the types of consequences holding in virtue of their terms, which paralleled some rules of his treatise *On Consequences* as well as some passages of his treatise *On the purity of logic*, in both its short and long versions.

⁴³⁶ R. Bacon, *Summulae Dialectices*, III.3. It should be noted that while Peter of Spain called this topic "from the universal whole/from the genus", Roger specified that "isti loci nomine communi appellantur locus a toto universali, et locus a parte subiectiva. Quando tamen genus ordinatur pro medio dicitur locus a genere, et solum locus a toto est, quando autem ordinatur species pro medio, dicitur locus a specie; dicitur tamen communiter quod solum est affirmando, et ideo solum locus a parte".

⁴³⁷ Cf. Burley, *Tractatus* p. 115, n.9.

Firstly, Burley said, b) was omnitemporally valid in those consequences that held in virtue of two terms alone, namely in virtue of the relation between subjects, such as inferences from an inferior to a superior affirmatively, e.g. 'man runs, animal runs'.⁴³⁸ Secondly, when the consequence held in virtue of three terms, namely on the basis of the relation between two subjects and one predicate, then b) was valid temporally. E.g. in inferences from the integral whole to its part or from the superior to the inferior affirmatively, like "Brownie is risible, thus man is risible":⁴³⁹

Dicendum quod consequentia non est inter incomplexa sed solum inter propositiones et in illis semper destructo consequente destruitur antecedens. Quamvis enim quandoque tenet consequentia ratione terminorum, tamen inter terminos non est consequentia proprie. Consequentiarum vero quae tenent ratione terminorum quaedam tenet ratione duorum terminorum tantum et in talibus semper tenet consequentia respectu cuiuscumque praedicati, cuius est consequentia in qua arguitur ab inferiore ad superius affirmative. Quaedam vero tenet ratione trium terminorum, cuius est consequentia a toto integrali ad eius partem et a superiori ad inferius affirmando. Talis enim consequentia non valet respectu cuiuscumque praedicati, sed respectu talis praedicati respectu cuius unum non potest poni sine altero. Et ideo dicitur talis consequentia tenere ratione trium terminorum quia tenet tam ratione praedicati quam ratione subiectorum.⁴⁴⁰

⁴³⁸ Cf. Burley, *Tractatus*, p. 116, n. 17.

⁴³⁹ Cf. Burley, *Tractatus*, p. 116, n. 20 and 25, p. 142, n. 117-118. In the long version of his *De puritate*, Burley labelled these consequences as formal consequences holding in virtue of the *forma incomplexorum*: "A formal inference is of two kinds: one kind that holds by reason of the form of the whole structure. Conversion is such an inference, and syllogism and so on for other inferences that hold by reason of the whole structure. Another kind is a formal inference that holds by reason of the form of incomplex terms. For example, an inference from an inferior to a superior affirmatively is formal, and nevertheless holds by reason of the terms. Thus, for an inference to hold by reason of the terms can happen in two ways, either because it holds materially by reason of the terms, or because it holds formally by reason of the terms – that is, by the *formal* reason of the terms" (Walter Burley, *On the Purity of the Art of Logic. The Longer Treatise*, in, *Id., On the Purity of the Art of Logic. The Shorter and the Longer Treatises*, trans. by P. V. Spade, Yale University Press: New Haven, 2000, p. 173).

⁴⁴⁰ Burley, *Notulae*, C. 147ra-rb; cf. Scotus' parallel passage: "Ad quod dicendum quod consequentia primo est inter propositiones et in illis semper destructo consequente destruitur antecedens. Quando tamen est consequentia ratione terminorum, ut a toto integrali ad partem et a superiori ad inferius, et illa tenet respectu unius praedicati respectu cuius unum non potest poni sine altero, sed respectu unius praedicati quod extraneatur uni et convenit alteri non tenet. Destructo ergo consequente, ut quaternario, respectu illius praedicati respectu cuius sequitur ad senarium, ut respectu huius quod est esse destruitur et senarius sed non consequuntur se respectu huius quod est excedere quinarium" (Scotus *Notabilia*, f. 258vb).

5.3.3 In the following topic, Aristotle prescribed to analyse any question about the predicable ‘accident’ by considering the time involved in it, in order to detect possible incongruities. And among the examples he gave, was the statement, with a Platonic flavour, “knowing is remembering”. It contained a temporal discrepancy since ‘to remember’ concerned the past, while ‘to know’ extended to present and future.⁴⁴¹

In commenting upon this topic, Robert (A.7) did not take into account the maxim, but he rather discussed the examples given by Aristotle, trying to reconcile the view of knowledge as reminiscence with the Aristotelian epistemology.⁴⁴² Albert the Great too focused more on the epistemological content of Aristotle’s example than on the prescription itself. Similarly to Simon of Faversham, Boethius of Dacia took as starting point Aristotle’s words that “est recordari praeteritorum, scire autem praesentium et futurorum” for inquiring “utrum contingit scire futura”.⁴⁴³

Instead, Pseudo-Bonaventure (A.4) took into account the connection between modality and time. He raised an objection against the topic starting from the Aristotelian definition of necessary as that what cannot be otherwise, given in the *Metaphysics* (V.5, 1015a35-b9). If what inheres in something *secundum tempus* changes *secundum tempus*, then nothing of what inheres in something *secundum tempus* inheres in that something necessarily. The commentator (A.4) found a solution by applying the distinction between simple and absolute necessity:

Necessitas <quaedam est> simpliciter et <quaedam est> absolute. Et haec est supra omne tempus, et necessitas quaedam temporalis, eo quod solum habet necessitate in tempore, quae, quia temporalis est, ideo se potest habere aliter quam se habet. Et de hac loquitur hic, sicut patet per sua exempla.⁴⁴⁴

Scotus and Burley focused on the topical precept and considered it in light of the rules for consequences. This topic, they stated, consisted in considering whether the

⁴⁴¹ *Top.* II.4, 111b24 (*AL* p. 38,1).

⁴⁴² A.7, f. 43ra.

⁴⁴³ A.13, II, q.20, pp. 146-148; A. 18, f. 32va.

⁴⁴⁴ A.4, p. 92.

antecedent was true without the consequent, in which case the consequence would be invalid. Burley specified that this rule held only for simple consequences, while it was not applicable to the 'as-of-now' consequences. In saying that, he introduced the distinction between simple or natural, and 'as-of-now' or accidental consequences.⁴⁴⁵

Si ponatur aliquod consequens sequi ad aliquod antecedens videndum est an antecedens posset aliquo tempore esse verum consequente non existente vero in eodem tempore. Et si non, sequitur quod consequentia est bona, et si sic, sequitur quod consequentia non valet. Et hoc intelligenda sunt de consequentia simplici et non de consequentia ut nunc [...] Dico ergo quod in illa dissonantia debet referri ad mensuras antecedentis et consequentis, sic quod si pro aliqua mensura ponatur veritas antecedentis pro qua non ponitur veritas consequentis, tunc consequentia non valet quia universaliter est verum de consequentia simplici. Si autem illa dissonantia secundum tempus intelligatur de praedicatione, non de consequentia, ita quod sic intelligitur: si praedicatum et subiectum dissonent tempore vel compositio implicita in subiecto et compositio principalis dissonent tempore tunc propositio est falsa [...] Ideo pro illo est intelligendum quod si illud dictum Philosophi applicetur ad praedicationem debet sic intelligi quod ad veritatem cuiuslibet propositionis affirmativae requiratur quod subiectum et praedicatum uniantur pro aliqua eadem mensura indivisibili, sed non requiritur quod utrumque extremum pro eadem mensura adaequata mensuretur.⁴⁴⁶

⁴⁴⁵ For this distinction see the first of the general rules of inference in Burley, *On the purity. Long treatise*, p. 147.

⁴⁴⁶ Burley, *Notulae*, C. 147rb-va. Cf. Scotus, f. 259rb: "*Amplius ad tempus*. Istud potest esse pro documento ad videndum inutilitatem alicuius consequente(sic!) et est si consequens dissonet tempore ab antecedente hoc est si antecedens posset esse pro aliquo tempore pro quo consequens non sit, non si antecedens mensuretur aliquo tempore a consequente, ex quo patet solutio huiusmodi instantiae, sequitur: est compositum ex contrariis ergo corrumpetur quia et hic est dissonantia in tempore quo mensuratur compositio antecedentis et commensuratur compositio consequentis sed pro nullo tempore potest antecedens poni pro quo non potest consequens poni. Si autem ista regula applicetur ad predicationem et arguatur hanc esse falsam compositum ex contrariis corrumpetur quia praedicatum et subiectum dissonant in tempore, intelligendum quod oportet ipsa in omni propositione ad veritatem propositionis pro aliquo eodem tempore uniri sed non oportet utrumque in se eodem tempore mensurari. Potest enim intelligi compositum ex contrariis sumptum pro tempore preterito et corrumpi pro futuro uniri pro hoc nunc ergo oportet unionem extremorum intelligi pro eodem tempore sed neque oportet ipsa extrema in se intelligi sic".

It is significant that Burley, who was not afraid of being repetitive, did not give any definition of these two types of consequences, thus seeming to take for granted that his audience was already acquainted with the terminology and the notions mentioned. And it is also remarkable to note the unexplainable absence of any reference to the 'doctrine of the middle', which would have instead been in its proper place in this context. In the section on enthymematic consequences in his *Treatise on Consequences*, Burley had stated the rule according to which valid consequences held in virtue of a middle, which was a proposition. A valid simple consequence was omnitemporally valid and it was granted through an intrinsic middle, which was necessary since it was the cause of the consequent following from the antecedent, e.g. the inference 'man is, therefore animal is' was licensed by the medium 'every man is an animal'. A valid 'as-of-now' consequence was validated through an extrinsic middle which was contingently true.⁴⁴⁷

5.4 Pseudo Bonaventure (A.4), the forerunner of English Commentators.

Burley's *Notulae* disclosed points of contact with the commentary (A.4), which was wrongly attributed to Bonaventure. The incomplete Pseudo-Bonaventurian commentary consisted in many short questions to which some *notanda* could be appended; at times, short paraphrases were inserted between the questions. Unlike the strict dependence that we remarked between the *Notulae* and Scotus' *Notabilia*, the general approach to the questions and their arrangement varied significantly in Burley's and Pseudo-Bonaventure's writings. The similarities between them were circumscribed to the use of the same examples, arguments, counter-instances or *notanda*. An outstanding case is found at the beginning of the second book of the topics, where Aristotle warned about some viciousness that may occur in formulating dialectical problems. One such problem involved the incorrect use of language, such as to "call objects by the names of other objects".⁴⁴⁸ Burley explained

⁴⁴⁷ Burley, *Tractatus*, pp. 141-142, n. 116-117. On this doctrine, which was typical of English authors in the first half of the 14th century, such as Burley and Ockham, see Green-Pedersen, *The Tradition*, pp. 281-284; on Burley in particular, see Stump, *Dialectic*, p. 174.

⁴⁴⁸ Aristotle, *Topics*, II.1, 109a27-31 (in Barnes, *Complete Works*, vol. 1, p. 182).

that in this context Aristotle did not expound upon barbarism and solecism, since they fell in the field of inquiry of the grammararian rather than the dialectician. The same remark is found in the Pseudo-Bonaventure's text. To my knowledge, he and Burley were the only 13th century commentators, who mentioned barbarism and solecism in this place:⁴⁴⁹

Burley, <i>Notulae</i> , C. 140rb	Ps. Bonaventure (A.4), p. 74
De aliis autem vitiis cuiusmodi sunt barbarismus et solecismus quia primo et principaliter peccant contra congruitatem quam dialecticus supponit non determinat hic Philosophus.	Item. Cum vitium sit uti barbarismo et solecismo, sicut et transsumptione, propter quid est ita quod iuxta haec non assignatur aliquod peccatum circa problemata, sicut iuxta transumptionem [...] Ad aliud: quod barbarismus et solecismus sunt vitia circa orationem et principia orationis, secundum quod a grammatico consideratur quaerente circa ea congruitatem; logicus autem supponit congruitatem: et propterea huiusmodi vitia non determinat hic Philosophus.

In his treatment of the topics, Pseudo-Bonaventure employed the doctrine of the *appellatio*. The author seemed to oscilate between the use of *appellatio* and *suppositio*, and did not use the standard terminology for the various types of *suppositio*, which was expounded for example in Bacon's *Summulae* and in Sherwood's *Introductio*. Strikingly, the commentator A.4 seemed to adhere to an alternative "system for classifying reference that combine[d] reference and signification" which has been found sketched in an anonymous commentary from mid-13th century on the *Prior Analytics*. Even more noticeably is the fact that the exposition of this theory in

⁴⁴⁹ In discussing the topic from privative opposites (*Top.* II.8, 114a8ssq). the Ps-Bonaventure referred to an objection raised by Averroes: "Item respondet Averroes dicens, quod quamvis album et nigrum sint contraria species, tamen albi et nigri non sunt contraria, et species ipsae destruuntur per medium" (A.4, p. 104). The same objection, abridged, is found on a marginal gloss of the Magdalen College manuscript Lat. 187, ff. 85-158, which was written by an Anglican hand (1st half 14th century): "Nota: secundum Averrois quod quamvis album et nigrum sint contraria species, tamen albi et nigri non sunt contraria". I did not meet this reference to Averroes in the commentaries, which I have scrutinized.

Pseudo-Bonaventure's commentary coincides *verbatim* with that of the anonymous commentator of the *Prior Analytics*, who attributed the authorship of this system to some unspecified 'Magni'.⁴⁵⁰ According to this doctrine, an appellative noun such as 'homo' had a primary and secondary *significatum*. The primary significate of an appellative noun was the form or quality and it could be considered in two ways: 1) the significate was separated from its particular instances (*appellata*), e.g. the subject term 'homo' in the sentence "homo praedicatur de pluribus hominibus in eo quod quid <est>" signified a form or quality; 2) the significate was instantiated and multiplied in particular instances, e.g. 'homo' within the sentence "Sortes est homo, Plato est homo". The secondary significate was an *aggregatum* and it could also be considered in two ways: I) the significate was detached from individuals (*contra appellata*), e.g. 'homo' in "Homo definitur hac oratione, animal rationale mortale" signified the species; II) the significate was instantiated in matter, e.g. 'homo' in "Homo currit" signified the species insofar as it was embodied in individuals. "The Magni adapted the old dictum 'The subjects are such as the predicates permit' to their purposes by interpreting it to mean 'The subject term stands as required by the predicate term, in respect of 'mode of subjecting', for the primary or for the secondary significate provided its doing so is compatible with having the predeicate in question. Similar considerations of compatibility decide whether the significate of the subject term should be taken to be mode 1 [and I] or mode 2 [and II]".⁴⁵¹ Pseudo-Bonaventure applied this doctrine to solving the sophisms "Homo est dignissima creaturarum" and "Piper venditur hic et Romae", which were distinctive of English logic:

Hoc nomen 'homo' habet duplex significatum, scilicet primum et secundum. Primum significatum est forma sive qualitas, secundum significatum est aggregatum. Gratia primi significati sunt duo modi diversi: potest enim considerari, aut secundum quod est absolutum a suis appellatis, ut hic "Homo

⁴⁵⁰ S. Ebbesen, "Early Supposition Theory (12th-13th centuries)", in *Histoire Épistémologie Langage* 3/2 (1981), pp. 35-48, here p. 45. Ebbesen conjectures that the Magni could be a group of Dominicans. On this theory as well as for the transcription from the anonymous commentary in ms. Cambridge Peterhouse 36, see *ibid.*, pp. 45-48.

⁴⁵¹ Ebbesen, "Early Supposition", p. 46.

praedicatur de pluribus hominibus in eo quod quid <est>"; praedicatum enim in hac propositione convenit formae sive qualitati ita quod non appellatis. Alio modo consideratur ista forma, in quantum multiplex et inest singularibus, et sic stat hic "Sortes est homo, Plato est homo" et in consimilibus. Similiter autem potest secundum significatum, quod est aggregatum, dupliciter considerari. Aut in quantum assignatur contra appellata, et sic stat hic "Homo definitur hac oratione animal rationale mortale". Aut in quantum est significatum in materia et sic stat hic "Homo currit." Secundum iam narrata igitur est haec vera "Homo est species" sive ly 'homo' stet pro primo significato sive pro secundo. Duplex enim est descriptio speciei: scilicet "Species est quae praedicatur etc.", item "Species est quae subicitur generi". Et utroque istorum modorum est haec vera "Homo est species" et primo modo stat ly 'homo' pro primo significato eius, secundo modo pro secundo. Et universaliter tenendum quod, quando aliquid praedicatur de nomine appellativo, si patitur praedicatum ipsum nomen appellativum, quod subicitur stare pro primo significato, stabit et sic; si non, sed exigit quod stet pro secundo significato, stabit et sic. Et forte haec est intentio Boetii dicentis "Talia sunt subiecta qualia permiserint praedicata". Hoc enim verum est quantum ad modum subiciendi, non enim ita quod praedicatum coarctet subiectum quantum ad appellata.⁴⁵² Et ita patet quod cum dicitur "Piper venditur hic et Romae", ly 'piper' stat pro secundo significato pro primo eius modo [*scil.* 2].⁴⁵³

The view endorsed by Pseudo-Bonaventure, perhaps "just one several abortive attempts to create a unified theory of signification and reference", soon fell into oblivion. The connection with such a doctrine confirms Green-Pedersen's dating of the commentary A.4 to the mid-13th century ca. This early dating accounts for the differences which separate it from the later writings of Scotus and Burley. Unlike the two masters, in commenting on the first book, Pseudo-Bonaventure dealt with metalogical issues concerning the epistemic status of logic and dialectic, their subdivision in inventive, and judicative. He also inquired into the nature of syllogism. In his exposition, he approached those issues differently than his Parisian

⁴⁵²A.4, pp. 145-146. Cf. with Ebbesen, "Early Supposition", pp. 47-48.

⁴⁵³ A.4, pp. 146-147.

colleagues. Another point of divergence between the forerunner A.4 and Burley and Scotus was the treatment of the *loci*. Pseudo-Bonaventure, indeed, still assigned a role to the Boethian topics, although he massively used the consequences, which had not yet become predominant over the *loci*. Thus, in this early commentary, the Boethian tradition of the topics was still vivid. And his view of a not completely ‘formalized’ logic or dialectic, allowed Pseudo-Bonaventure to acknowledge the possibility of a formally valid inference that was dialectically invalid.⁴⁵⁴ Furthermore, it gave him the freedom to deal with issues which were not technical, such as whether good and evil, in intelligences, were contrary or privative opposites, and to answer that

Item: intelligentiis est plus et minus de bono et tamen nihil mali est ibi omnino et sic videtur quod prior propositio est falsa [...] Ad aliud: quod bonum et malum, sicut ex saepe dictis patet, non opponuntur intelligentiis contrarie, sed privative. Ex hoc videtur aut quod intelligentiae prius fuerint malae, aut aptae natae ut possent fuisse malae; quod concedi potest secundum fidem, quamvis fortasse hoc sit contra Aristotelem.⁴⁵⁵

Conclusion

As can be drawn from the statutes of thirteenth century arts faculties, Aristotle’s *Topics* were listed among the mandatory texts for the undergraduate curriculum, along with the other writings that formed the *logica nova*. All of this university activity around these required texts produced many commentaries. At times, however, the information drawn from university prescriptions does not seem to provide a completely reliable picture of the teaching practices of the time. This

⁴⁵⁴ “Quod talis illatio est necessaria, et quia non est manifesta, ideo apparet opponentem manifestare similitudinem illius principii ad omnia alia principia eiusdem speciei, qua visa et concessa a respondente potest opponens inferre universale. Et nisi hoc concederetur a respondente non possent sic inferre; quamvis tamen illa illatio per se sit necessaria eo quod dialectica illud quod est ad aliud est, ex iis patet quod in tali argumentatione aut est locus a simili aut a pari” (A.4, bk. III, *Utrum universale inferatur ex particulari et qualiter*, p. 142).

⁴⁵⁵ A.4, bk. 3, pp. 139-140.

indeed is the case with the Oxford residual manuscript tradition: the extant lectures we can examine do not match completely the official university regulations. According to catalogues, only three commentaries were produced in England from the mid-13th century to the beginning of the 14th century: the incomplete commentary attributed to Bonaventure (A.4), Scotus' *Notabilia* and Burley's *Notulae* – the latter of which was the last testimony of the English tradition of the *Topics*.

From his comments on the Aristotelian text, Pseudo-Bonaventure seemed to have endorsed the semantic of the 'Magni,' namely a "system for classifying reference that combine[d] reference and signification", which constituted an alternative to the standard doctrine of *suppositio*. The Pseudo-Bonaventurian commentary dealt with metalogical issues concerning logic and dialectic, which were perhaps the most problematic topics of his age. Moreover, in dealing with the Aristotelian topics, Pseudo-Bonaventure employed the *appellatio* and sophisms, the Boethian topics beside the consequences. In this early commentary, the Boethian tradition of the topics walked hand in hand with the doctrine of consequences, which in the short term would have become predominant.

Pseudo-Bonaventure's work discloses some literal similarities with Burley's commentary on the *Topics*. Despite these affinities, however, Burley's *Notulae* represented a further step in the English tradition of the *Topics*, along with Scotus' *Notabilia*. These two later works are representative of a mature phase. They disregarded general issues about logic, which had interested Pseudo-Bonaventure, and still caught the attention of Parisian commentators. Scotus and Burley preferred to focus on specific logical problems. Moreover, in both the *Notabilia* and the *Notulae* we find at work a fully-fledged doctrine of the *suppositio*, along with the rules for consequences, which the two masters employed in their treatment of the topics listed in the central books of the *Topics*. Thus, the Boethian tradition of the *Topics* remained in the background in the *Notabilia* and in the *Notulae*. While Scotus had still left scant room for the Boethian topics, Burley dealt with the topics, and especially those of the second book, in light of the theory of consequences. Burley indeed seemed to implicitly equate topical rules, viz. the maximal proposition, to the rules for consequences.

Some passages of the commentaries of Pseudo-Bonaventure and Burley bore resemblance with marginal glosses of the *Topics*. Particularly, the *expositio textus* of Burley's *Notulae*, along with other specific remarks, filled the margin of the Balliol manuscript, which contained the Boethian translation of the *Topics*. Similarly, other manuscripts, which preserved the Latin text of the Aristotelian *Topics*, were glossed by 14th and 15th century Anglican hands. Perhaps, also such marginal scholia should be considered, and studied, as the outcome of the academic activities of masters and students. They could aspire to receive a place within the English tradition of the *Topics*. This tradition has emerged as characterized by specific features, strictly connected to terministic logic. The interest in technical, logical issues and the contextual approach, the use of the *suppositio*, the presence of sophism and the focus on consequences were peculiar to English commentaries. In contrast, continental commentaries were walking along a different path.⁴⁵⁶

⁴⁵⁶ Strickingly, Green-Pedersen has not remarked the dissimilarities between A.4 and Burley's *Notulae* on the one hand, and Parisian comentariers on the other hand: "The only British commentary from the period, the *Omne quod* (A.4) is not far from the Parisian standpoints" (Green-Pedersen, p. 226).

Chapter Six. A new perspective: John Buridan on the *Topics*.

6.1 Buridan on the subject matter of dialectic.⁴⁵⁷

6.1.1 According to the manuscript tradition, in the first half of 14th century the *Topics* were less commented upon in Paris classrooms than during the second half of 13th century. The 14th century opened with the *Quaestiones* of Radulphus Brito, which closed the epoch of the modistic approach to the *Topics*. In the first half of the century Durandus de Alvernia compounded his commentary in form of sentence, which seemed “somewhat old-fashioned for its period”.⁴⁵⁸ And John Buridan lectured on the *Topics*, presumably at the beginning of his teaching activity.⁴⁵⁹ His *Quaestiones Topicorum* discloses the influence of modistic commentaries, especially that of Brito’s *Quaestiones*, in his dealing with various issues, such as the questions devoted to the nature of syllogism or to the syncategorematic term ‘omnis’.⁴⁶⁰ Despite some points of contact between the Modists’ and Buridan’s commentaries, Buridan’s work adopted a completely different attitude toward the text, which was determined by his nominalistic semantic.

Unlike his predecessors, Buridan did not address general questions about logic and dialectic in the first book of his commentary, which covers one-third of the entire work. Yet, from his prologue to his *Summulae de Dialectica*, we know that he considered dialectic an art rather than a science. In the opening question of his

⁴⁵⁷ On John Buridan, see B. Michael, *Johannes Buridan: Studien zu seinem Leben, seinen Werken und zur Rezeption seiner Theorien in Europa des späten Mittelalters*, PhD diss., University of Berlin, 1985, 2 vols; J. Zupko, *John Buridan. Portrait of a 14th-Century Arts Master*, South Bend (IN): University of Notre-Dame Press, 2003; G. Klima, *John Buridan*, Oxford: Oxford University Press, 2009; J. Biard, *Science et nature. La théorie buridanienne du savoir*, Paris: Librairie Philosophique J. Vrin, 2012.

⁴⁵⁸ Green-Pedersen, *The Tradition*, p. 393.

⁴⁵⁹ This set of *Quaestiones* seems to be the outcome of Buridan’s earlier teaching activity recorded by a student and preserved in different versions in five manuscripts, all produced in Middle or Eastern Europe in the 15th century. The Buridanian paternity has been cautiously accepted by Green-Pedersen, and no scholar has questioned this: N. J. Green-Pedersen, “Introduction”, in J. Buridanus, *Quaestiones Topicorum*, ed. by N. J. Green-Pedersen, Turnhout: Brepols, 2008 (hereafter abbreviated as QT), pp. ix-xxi. See also Green-Pedersen, *The Tradition*, pp. 392-393, A.21.

⁴⁶⁰ According to Mora-Márquez, there are some “passages in John Buridan’s commentary on Aristotle’s *Topics* that can be seen as a continuation of Boethius’ and Brito’s treatment of ‘every’” (Mora-Márquez, “Boethius”, p. 194).

Quaestiones Topicorum, Buridan originally dealt with the conventional issue concerning the *subiectum adaequatum* of the *Topics* and of dialectic in general. The Picardian abandoned the view, held by all commentators of the 13th century, both anonymous and famous, such as Albert the Great and Boethius of Dacia, according to which dialectical syllogism was the proper subject (*subiectum adaequatum*) of dialectic. Buridan asserted that the proper subject was instead dialectical argumentation, as declared by Aristotle himself at the beginning of the book. Here the Stagirite had stated that the main purpose of the treatise was to find a method for producing deductions (*sylogizare*). And Buridan interpreted the terms *sylogizare* and *sylogismus* not in the technical sense related to the *Analytics*, but as dialectical argumentation. And his view was adopted by Marsilius de Inghen some years later, in his *Abbreviatio libri Topicorum*.⁴⁶¹

Buridan argued that *argumentum/argumentatio* was not the same as nor coextensive with syllogism. Only demonstrative and dialectical syllogism were arguments, since they proved their conclusions:

De ratione syllogismi dialectici et similiter demonstrativi est *probare suam conclusionem et facere fidem de ea* [...] de ratione syllogismi simpliciter *non est probare suam conclusionem, sed inferre eam ex praemissis in consequentia necessaria* [...] Unde dico non omnem syllogismum esse argumentum, sed bene omnem syllogismum dialecticum et omnem syllogismum demonstrativum.⁴⁶²

These words recall to mind the distinction between inferring and probative syllogisms, a distinction adopted mainly by the advocates of the plurality of forms and which was mentioned in modistic commentaries.

6.1.2 However, before focusing our attention on dialectical argumentation - on how Buridan understood this in his *Quaestiones Topicorum* and on how it fits into his view

⁴⁶¹ Buridanus, *QT*, book I, q. 1, pp. 8 and 11. Marsilius of Inghen, *Abbreviatio libri Topicorum*, Wolfenbüttel, Herzog August Bibliothek 3161 (18.31, Aug. 4^o), ff. 187va-190vb, here f. 187 va. I wish to thank Mr. Christophe Geudens, who kindly provided me with his transcription of Marsilius' *Abbreviatio* and most kindly allowed me to make use of it.

⁴⁶² Buridanus, *QT*, I, q. 4, p. 25, emphasis added. Cf. also Buridanus, *SD*, 6.1.4: "Syllogismus invenitur extra capacitatem argumentationis".

about dialectic - it may be useful to take a glance at the more general notion of *argumentatio*. What exactly is an *argumentatio* for Buridan? As we have seen, Boethius and then Peter of Spain had defined an argument as the “*ratio rei dubiae faciens fidem*”.⁴⁶³ At the beginning of the fifth tract (*De locis*) of his *Tractatus*, Peter of Spain had understood the *ratio* of the argument as the middle term that proves the conclusion (“*medium probans conclusionem*”). Commenting on this passage, Buridan rejected Peter’s interpretation, probably because it would have limited the range of dialectically valid forms of argumentation to syllogism. Buridan closely followed Boethius. At the beginning of the sixth treatise of his *Summulae de Dialectica* devoted to the *Topics* (*De locis*), he emphasized the difference between argument and argumentation. An argument (*argumentum*) was the mental process (*ratio*) through which the mind of the agent was compelled to concede his more or less firm assent to the hitherto doubted or unknown conclusion, whereas argumentation (*argumentatio*) was the vocal process that spelled out the mental process:

Argumentum et argumentatio differunt sicut processus mentalis et processus vocalis. Argumentum enim est processus in mente, quo mens ex praemissis mentalibus sibi notis cogitur concedere conclusionem sibi prius ignotam vel dubiam [...] Argumentatio autem est processus vocalis exprimens et explicans significative praedictum processum mentalem.⁴⁶⁴

A few pages later, he provided us with some hints about the essential features of the *argumentatio*:

⁴⁶³ Buridanus, *SD*, 6.1.2, in Johannes Buridanus, *Summulae de locis dialecticis*, ed. by N. J. Green-Pedersen, Turnhout: Brepols, 2013 (hereafter abbreviated as Buridanus, *Locis*), pp. 8-9.

⁴⁶⁴ Buridanus, *Locis*, 6.1.2, pp. 8-9. Since for our purposes the difference between the mental and the vocal level is not fundamental, I will use interchangeably the terms argument/*argumentum* and argumentation/*argumentatio*. In his *De Topicis Differentiis* Boethius had clearly distinguished between *argumentum* and *argumentatio*: “Argumentum est ratio rei dubiae faciens fidem [...] est vis sententiae ratioque ea, quae clauditur oratione [...] argumentum quidem virtus vel mens argumentationis sit atque sententia”. The *argumentatio* was the “*elocutio argumenti* [...] per orationem argumenti explicatio”. On Buridan’s distinction between *argumentum* and *argumentatio* as mental and vocal acts, see Zupko, *John Buridan*, p.

84; J. Biard, “Le lieu de la croyance: le traité sur les Topiques de Jean Buridan”, in Biard-Mariani-Zini, *Les Lieux*, pp. 359-383; Biard, *Science et nature*, pp. 212-219.

Ad argumentum vel argumentationem requiritur *cum necessitate vel probabilitate consequentiae* quod consequens *probetur* per antecedens. Ad hoc autem quod sit huiusmodi *probatio* oportet quod antecedens sit *notius* consequente; aliquando autem fiunt syllogismi, inductiones, enthymemata vel exempla ex antecedente aeque vel *magis dubio* quam sit consequens, vel etiam ex antecedente evidenter falso ad conclusionem evidenter falsam [...] Et constat quod ibi nulla est conclusionis probatio, ideo tales syllogismi vel inductiones etc. non sunt argumenta neque argumentationes.⁴⁶⁵

From these lines, *argumentatio* emerges as a complex concept, a Janus pointing in two directions at the same time. Its logical face looked at the objective relation or entailment⁴⁶⁶ holding between an antecedent and a consequent of a reasoning or consequence, and at the various valid forms under which formally valid argumentations fall. And the epistemological face looked at the *probatio conclusionis*,

⁴⁶⁵ Buridanus, *Locis*, 6.1.4, p. 11 (emphasis added). Klima's English translation of this passage overlooks the fundamental word *probabilitate* ("an argument or argumentation requires not only the necessity of the consequence but also the proof of the conclusion, so that the consequent should be proved on the basis of the antecedent" (*SD*, p. 394)). The oversight of this word could lead to what I believe is an incorrect interpretation of Buridan's notion of argumentation that considers exclusively necessary inferences.

⁴⁶⁶ In the above passage (Buridanus, *Locis*, 6.1.4, p. 11), the term *consequentia* means the entailment, which is also expressed through the term *illatio* in the *Quaestiones*. In the Middle Ages, *argumentatio* and *consequentia* were polysemantic terms and it is difficult to determine their meaning without referring to the discussion and the matter at hand. Therefore, I will try to disambiguate them when they occur, providing what I suppose is their meaning in the context under analysis. For example, the term *consequentia*:

- 1) can signify the inferential link that confers the inferential force to the consequence, thus it is a synonym of *illatio*;
- 2) can be employed as a synonym of conditional proposition, as in the *Tractatus de consequentiis* (hereafter *TC*), 1.3;
- 3) can mean an assertoric inference, and it is an argument (see Buridanus, *SD*, 8.5.2).

In his *SD*, 7.4.5 Buridan explained that consequence was said in two ways: a) consequences that are hypothetical propositions, more precisely conditionals, and that were not argumentations; and b) consequence having an assertoric form; they were argumentations (see also *SD*, 5.1.3). Here Buridan seems to distinguish between consequences and conditional propositions (see P. King, "Consequence as Inference: Mediaeval Proof Theory 1300-1350", in M. Yrjönsuuri, *Medieval Formal Logic: Obligations, Insolubles, and Consequences*, Dordrecht-Boston-London: Kluwer Academic Publishers, 2001, pp. 117-145). G. Sundholm listed four meanings of the medieval notion of *consequentia*, which covered four modern notions: 1) conditional; 2) consequence; 3) causal grounding; 4) inference. Except for the third meaning - causal grounding, Sundholm's list appears to match Buridan's notions of *consequentia* and *argumentatio*: 1) conditional: this might correspond to the *consequentia* insofar as it is a conditional proposition; 2) consequence: this could be akin to Buridan's *illatio*; 4) inference: this should amount to the *probatio*. See G. Sundholm, "Inference versus consequence" revisited: inference, consequence, conditional, implication", in *Synthese* 187 (2012), pp. 943-956, here p. 946; see also Sundholm's articles about the issue, mentioned in Sundholm, "Inference versus consequence".

or proof of the conclusion, namely the process that performed a transfer of certainty and knowledge from the premises to the conclusion, at the end of which a *fides* was produced in the agent, whose body of knowledge was therefore increased.

6.1.3. Since the notion of *argumentatio* could be analysed from these two autonomous vantage points, consequently its validity could be evaluated on different bases. From the perspective of the *consequentia/illatio*, or entailment, the formal validity of the *argumentatio* was established according to: 1) the truth-preservation criterion: this was a necessary but not sufficient requirement for a valid consequence and was met by both formal and material consequences; 2) the logical criterion of substitution (SC), according to which a formal consequence was valid (*bona*) iff

in omnibus terminis valet retenta forma consimili. Vel si vis expresse loqui de vi sermonis, consequentia formalis est cui omnis propositio similis in forma quae formaretur esset bona consequentia, ut: Quod est A est B; ergo quod est B est A.⁴⁶⁷

If the *illatio/consequentia* was *necessaria*, then it underwrote a formally valid reasoning that satisfied the substitution criterion (SC) and which “formaliter et de necessitate concludit”, such as syllogisms, conversions and equivalences. If the *illatio/consequentia* was *probabilis/probable* it underwrote a formally invalid reasoning, which could be non-formally (e.g. materially) valid, like material consequences.

6.1.4 From the standpoint of the *probatio*, or proof, an argumentation was valid if it satisfied the epistemological “probativeness” criterion (PC), which took into account: 1) the epistemic status of an argument’s premises: the premises should be either more know or more probable (*notiores*) than the conclusion; 2) the evidentness of the argument’s inferential link: the agent should be able to recognize if the

⁴⁶⁷ TC, 1.4; cf. also SD, 1.6.1. On Buridan’s theory of consequences see E. A. Moody, *Truth and Consequence in Medieval Logic*, New York-Amsterdam: North-Holland, 1953; C. Dutilh Novaes, *Formalizing Medieval Logic: Suppositio, Consequentia and Obligationes*, Berlin: Springer, 2007, pp. 79-144; Klima, *John Buridan*; Zupko, *John Buridan*; King, “Consequence as Inference”.

consequentia underwriting the argumentation was necessary or probable. This capability relied on the agent's acquired competences, such as his logical knowledge, as well as on his natural and artificial skills.

Probative argumentations, then, differed according to the higher or lesser degree to which they satisfied the probativeness criterion (PC):

I) *Demonstratio*/demonstration: it was an argumentation that perfectly met the criterion (PC); it had the highest degree of certainty since: I.a) its premises were known scientifically, that is they were true and were reckoned to be such; I.b) the necessary inferential link was evident; I.c) the agent's assent to the conclusion was qualified as *scientia*.

II) Dialectical argumentation: it met the probativeness criterion (PC) only partially since: II.a) its premises appeared to be and were believed to be true, but the agent was not certain about their real truth-value, since the proposition opposite to the accepted premises could be true too; II.b) it produced a less certain and still doubtful assent that qualified as *opinio*.

For example, the syllogism "Every b is a; every c is b; therefore, every c is a" was a valid *illatio*, but it was not an argumentation. Whilst the syllogism "Every mortal rational animal is risible; every man is a mortal rational animal; therefore, every man is risible" was an argumentation, more precisely a demonstrative argumentation.

6.1.5 Argumentations differed in kinds through the interplay of the substitution criterion (SC) and of the probativeness criterion (PC). A reasoning could satisfy:

- 1) the substitution criterion alone (SC): a formally valid reasoning – namely a *bona consequentia* such as conversions, obversions, equivalences, or fallacious syllogisms – was an *argumentum*/argumentatio from the logical viewpoint. Despite its logical validity, such reasoning could not be qualified as *argumentum* or *argumentatio* in the specific meaning of the term given the above definition of *Locis* 6.1.4, since it did not produce any *fides* or knowledge in the agent;
- 2) the probativeness criterion alone (PC): a persuasive but formally invalid reasoning – such as enthymemes, inductions, examples, and all probable reasoning validated through topical maxims – could be qualified as argument(ation) from the

epistemological viewpoint. These *probationes* were dialectical argumentations and produced *opinio* in the agent;

3) the substitution as well as the probativeness criteria (SC & PC): 3a) dialectical syllogism: it met the substitution criterion fully (SC) and the probativeness criterion imperfectly (PC), since its premises were not necessary and true, but only probable; it produced *opinio*; 3b) demonstrative syllogism or *demonstratio*: it was perfectly necessary and perfectly probative, thus it produced an undoubted assent in the agent, namely the *scientia* or knowledge.

The two criteria should not be conflated nor confused, since they have distinct and complementary functions.⁴⁶⁸ The probativeness (PC) seemed to be prevailing over the substitution criterion (SC) for discriminating between a valid argumentation and reasoning that was not an argumentation. Indeed, as declared in the above definition of *argumentum/argumentatio*, the scope of the argumentation was to produce belief (*facere fidem*) in the agent about something doubted. Within Buridan's epistemology, the *fides seu credulitas* was the assent by which the subject believed that a proposition, namely the conclusion, was true or that things were as that proposition signified. On the bases of its degree of certainty, the assent added to the proposition was qualified either as *scientia* or as opinion. And insofar as it was a *probatio*, such reasoning produced the agent's assent (or *fides*) to the hitherto doubtful proposition or conclusion.

⁴⁶⁸ In his discussion of dialectical or topical arguments and topics, Zupko highlighted the novelty of Buridan's epistemical approach to the doctrine of topics and acknowledged that arguments or argumentations, insofar as they were *probationes* or proof, had to satisfy the epistemic "criterion of plausibility or evidentness (*evidentia*)": "for such a proof to occur it is required that the antecedent should be better known [*notius*] than the consequent". However, along with almost the majority of Buridan's scholars (exceptions being J. Biard, H.U Wöhler and J. Ashworth, who admitted that in *SD*, 8.4.1 Buridan acknowledges arguments that are not valid "soit formellement, soit matériellement", but did not go any further nor differentiated explicitly between the *probatio*'s and *illatio*'s validity criteria), Zupko conceived of arguments and argumentations as necessary inferences, and provided as evidence Klima's English translation of a passage from the *Summulae* (see supra fn. 465), which did not translate the Latin 'probabilitate'. Perhaps the missing of this word could have caused the hermeneutical trouble encountered by Zupko when he compared the passage of the *Summulae* with the *QT*, I, q. 16, in which it was said that the dialectical argument did not infer necessarily: "But the term 'argumentation' turns out to be ambiguous" (Zupko, *John Buridan*, p. 85). In my view, this claim is true, but the ambiguity does not follow from inconsistencies about the necessity or not of argument, rather from the possibility of taking into account the notion of argumentation from a double vantage point. For Wöhler see Wöhler, pp. 169-170; for Ashworth's claim see E. J. Ashworth, "Le syllogisme topique au XVI^e siècle: Nifo, Melanchthon et Fonseca", in Biard-Mariani-Zini, *Les Lieux*, pp. 408-430, here p. 413.

6.2 *Argumentatio* in Buridan's *Quaestiones Topicorum*: *illatio* and *probatio*.

6.2.1 Consistent with the notion of *argumentatio* provided in the *Summulae*, Buridan offered a logical as well as an epistemic picture of *argumentatio perfecta* in question 16 of his commentary on the first book of the *Topics*. The logical aspect of *argumentatio* was expounded through formal and logical features, such as the necessity of the entailment. And its epistemic side was elucidated in terms of *probatio*, which implied intentional and psychological requirements as *fides*, *certitudo*, *evidentia*:

Argumentatio dicitur perfecta *vel* (1) quantum ad *illationem* conclusionis *vel* (2) quantum ad *probationem* conclusionis; aut argumentatio dicitur perfecta, *vel* (1) quia *consequentia*, *qua infert* suam conclusionem, est *necessaria*, *vel* (2) quia perfecte *probat* suam conclusionem.⁴⁶⁹

Buridan then briefly sketched the different kinds and degrees of perfect argumentation considered from the perspective of the *probatio*, or proof of the conclusion, as well as of the *illatio*, or entailment. A valid illative argumentation (1) could be: 1.1) imperfect: such as conversions, equivalences and subalternations; 1.2) perfect: reasoning having syllogistic form. Perfect illations were bipartite in: 1.2.1) non evident: the second and third figures of syllogism; 1.2.2) evident: the first four modes of the first figure syllogism, which concluded directly and were the only perfectly necessary as well as evident deductions.⁴⁷⁰ This inner articulation of the illative arguments into imperfect and perfect, partly matched the classification of the different kinds of formal consequences that appear in the opening lines of the third book of the *Tractatus de consequentiis*.⁴⁷¹

⁴⁶⁹ Buridanus, *QT*, I, q. 16, p. 66, emphasis and numeration added.

⁴⁷⁰ Buridanus, *QT*, I, q. 16, pp. 66-67; for the evidentness: *SD*, 8.4.4.

⁴⁷¹ *TC* 3.1.3 and 3.1.16-17. The wider classification of formal consequences elaborated in *TC* comprehends also consequences by interchange of some term between finite and infinite, consequences holding by virtue of a conjunct from a conjunction or a disjunction from one of the disjuncts, and, furthermore, by adjoining a proposition to a conditional proposition, as well as by

6.2.2 In the context of an inquiry about dialectic, it is more interesting to focus on how Buridan dealt with the notion of *argumentatio* from the angle of the proof or *probatio*. Although in the commentary on the *Topics* we do not find the Boethian definition of *argumentatio* given in the *Summulae*, still this stayed in the background and was presupposed. In the *Quaestiones* too, the probative or convincing argumentation emerged as the reasoning which brought the agent an epistemic gain. A probative argumentation, indeed, elicited a transfer of evidentness and certitude from the premises to the doubtful conclusion, in virtue of which the agent assented more or less firmly to the hitherto dubious proposition. In order to produce *fides* in its conclusion, such reasoning had to meet some special intentional requirements. Firstly, it should start from dialectical or demonstrative propositions or premises, which were better known – either with or without *formido* that the opposite was true – and more certain and more evident than both their opposites as well as their conclusion. Secondly, the argument's inferential link, whether it was necessary or probable, should be correctly known by the agent.

A reasoning that satisfied the epistemological probativeness criterion (PC) could be either a perfect proof or a dialectically convincing argumentation. For example, someone knew that the sun heated, but he doubted whether it produced fire through its light, since he could not figure out nor imagine how this would happen. However, it could be proved and known through a demonstrative argumentation such as “Everything that burns sets the combustible on fire and that which sets the combustible on fire generates fire; the sun burns and inflames; therefore, the sun produces fire”. The premises of this demonstration were evident in virtue of experiences (*ad sensum*) with concave mirrors. Also, the inferential link (*consequentia*) was evident, “therefore this syllogism produced knowledge of the conclusion, and was a demonstration”.⁴⁷²

The substitution criterion (SC) seemed to be insufficient and inadequate to evaluate the validity of the *probatio*, since a probative argumentation could indifferently have

analysing syncategoremes and by division, and, finally, those holding on account of the formal impossibility of the premise or the formal necessity of the conclusion.

⁴⁷² SD, 8.7.8, p. 748 (Klima's translation of the syllogism runs as follows: “Everything that burns and inflames something combustible and flammable can produce fire, but the sun burns and inflames something combustible; therefore, the sun can produce fire”).

a necessary or probable consequential relation: even though a *probatio* did not yield a necessary conclusion, still it could be convincing, as the argument: “He does penance; therefore, he sinned”. Despite the fact that it did not hold necessarily, since someone can do penance although he did not sin, this argument was considered a convincing one.⁴⁷³ The *probatio*, then, failed to achieve its task when it did not produce a more or less firm assent of the agent to the conclusion. This failure could be due to a bad choice of the starting points, as happens with premises that were either plainly false or less or equally known than the conclusion they had to prove.⁴⁷⁴ For example, the syllogism “Every animal is a stone; every piece of wood is an animal; therefore, every piece of wood is a stone” was a valid *illatio*, but was not a *probatio* since it started from evidently false premises.⁴⁷⁵

6.2.3 Thus, for the *probatio* and its validity an important role was assigned to subjective circumstances, such as the different cognitive states of the same agent at different times, of diverse agents at the same time or at different times. Evidence for the epistemological connotation of the *probatio* emerged from Buridan’s original answer to the question raised in Modistic commentaries on the *Topics* of whether the same syllogism could be at the same time dialectical and demonstrative.⁴⁷⁶ As we

⁴⁷³ Buridanus, *Locis*, 6.4.17, pp. 82-83 (*SD*, pp. 455-456). A necessary entailment was required for a demonstration; however, the necessity of the entailment was a necessary but not sufficient condition for its validity, whereas necessity was not essential to dialectical argumentation.

⁴⁷⁴ In *SD*, 8.4.2 Buridan said that even if someone had a demonstration available in utterance as well as in his mind, the *probatio* might fail – that is the person did not “believe on their bases [*scil.* the premises] the conclusion” – because the person did not believe the premises. And he did not believe the first indemonstrable principles because 1) of his bad nature (he was “malus”); or 2) of his lack of experience; or 3) his “voluntas libera” determined him not to believe self-evident first principles; or 4) his “consuetudo audiendi falsa” could prevent him from believing them. Buridan stated that dialectical argumentation could fail in producing a stable opinion about one side of the question, and instead generated a weak opinion, “propter apparentem probabilitatem rationum alterius partis”.

⁴⁷⁵ *QT*, I, q. 4, p. 25.

⁴⁷⁶ *QT*, I, q. 3, pp. 17-22. Unlike the Modistis, Buridan did not admit to the analogical predication of the simple syllogism. The Picardian master addressed the question of whether the same syllogism could be demonstrative and dialectical, in his *SD*, 8.4.2 and in the *Quaestiones in Analytica Posteriora*, I, q. 32. On this topic see S. Eebesen, “Proof and its Limits According to Buridan, Summulae 8”, in Z. Kaluza-P. Vignaux, *Preuve et raisons à l’Université de Paris: Logique, ontologie et théologie au XIV^e siècle*, Paris: Vrin, 1984, pp. 97-110; R. Pasnau, “Medieval Social Epistemology: Scientia for Mere Mortals”, in *Episteme*, 7 (2010), pp. 23-41; E. Karger, “A Buridanian response to a fourteenth century skeptical argument and its rebuttal by a new argument in the early sixteenth century”, in H. Lagerlund, *Rethinking the History of Skepticism: The Missing Medieval Background*, Leiden-Boston: E.J. Brill, 2010, pp. 215-231; J. Biard, *Science et nature*, pp. 143-182; C. Grellard, “Science et opinion dans le *Quaestiones super Analyticorum Posteriorum* de Jean Buridan”, in J. Biard, *Raison et démonstration. Les*

have seen, usually authors differentiated between dialectical and demonstrative syllogisms on the basis of their different matters, namely of their necessary or probable premises. Buridan accepted this distinction, but reformulated it in the light of his epistemology and ontology. In doing so, he sided with Boethius rather than Aristotle, since Boethius had indeed assigned a basic role to the subject's assent in epistemic processes. Indeed, the Boethian definition of argument as the reason that produces <firm> belief in the hearer about a doubtful issue, implied a psychological activity of the subject involved.⁴⁷⁷

According to Buridan, the necessary premises of demonstrative syllogisms were propositions which were known by the subject, namely which were firmly believed with certainty and evidentness. Whereas dialectical or probable propositions were those to which the subject assented, but less firmly and more doubtfully, since they could turn out to be false and its opposite proposition could be true. Thus, the most important element for discriminating between demonstrative and dialectical premises was not logical – i.e. premises' truth-value – but intentional and psychological (*penes maiorem vel minorem certitudinem*): it was the higher or lower degree of certainty of the agent's assent to the premises. The different cognitive states of the agent or of the agents also influenced his/their capability to correctly evaluate the inferential force of the consequence, which underwrote the syllogism. Let us take for example the case that at time t_1 the cognitive agents x and y are in different states, respectively epistemic and doxastic, about the propositions p that make up syllogism s and about the necessary consequence c , that confers the inferential force to s . Since p and c appear as merely opinable to y , accordingly s appears as a dialectical syllogism to y . However, in virtue of the higher competences or experience of x , p and c are known with certitude by x . Consequently, s is known to be a demonstrative syllogism by x .⁴⁷⁸

commentaires médiévaux sur les Seconds Analytiques, Turnhout: Brepols, 2015, pp. 131-150, esp. pp. 138-149.

⁴⁷⁷ Buridan was very close to Boethius, and this is not surprising: "It is quite remarkable how well acquainted Buridan is with *De differentiis Topicis*, which seems to have been falling out of use in his time" (Buridanus, *Locis*, p. xv). Perhaps, he was also acquainted with Radulphus Brito's commentary on the *De topicis differentiis*.

⁴⁷⁸ "Omnino consimilis syllogismus in me et in te est in me demonstratio et non in te (*dico 'omnino consimilis' quantum ad formam syllogisticam, et quantum ad propositiones, quoad formam earum, et quantum ad terminos*)" (SD, 8.4.2, emphasis added).

The same holds for a single cognitive agent, but at different times. Indeed Buridan acknowledged that the cognitive agent x could have different degrees of belief about s' components, namely p and c . At time t_1 , x is in the doxastic state, hence 1) x deems p and c to be merely probable; thus 2) s appears a dialectical syllogism to x . While at time t_2 , after having acquired further proofs or experience, x reaches an epistemic state. Accordingly, x reckons 1) p and c as necessary and 2) s as a demonstrative syllogism.⁴⁷⁹

This perspectivism is consistent with the Buridanian nominalist, or token-based semantic and ontology, since it shows that for Buridan there did not exist a type-demonstrative syllogism nor a type-dialectical syllogism. Moreover, such perspectivism seems to support the hypothesis that for Buridan probative arguments, both dialectical and demonstrative, were not evaluated according to the substitution criterion (SC), but on the grounds of the epistemological criterion of probativeness (PC)⁴⁸⁰.

The syllogism(s) “All rational mortal animals are risible; all men are rational mortal animals; therefore all men are risible” could be reckoned as both demonstrative, if its premises and the consequence were judged necessary, or dialectical. Buridan pointed out that in this latter case, the dialectical syllogism held in virtue of a dialectical maxim: “est dialecticus ex eo, quod tenet per una maxima dialecticae, scilicet per illam, quicquid praedicatur de definitione, etiam praedicatur de definite”. Thus, in the Buridanian view of dialectic, the tradition of the topics, specifically the Boethian tradition, was still present. And the *loci* preserved their function as warrants for dialectical arguments:

in demonstrationibus, quae sunt syllogismi integri ex praemissis per se notis vel per alios syllogismos sufficienter probatis, non oportet quaerere maximas nisi

⁴⁷⁹ Buridan admitted also the opposite dynamic, namely that the cognitive agent could move from an epistemic to a doxastic state, thus losing his acquired knowledge. And may be cause from the deterioration of his cognitive faculties and skills.

⁴⁸⁰ “A proof is a syllogistic molecular proposition in an individual’s mind producing knowledge in an individual’s mind”, in modern terminology “only tokens exist, not types” (S. Ebbesen, “Proof and its Limits”, p. 98).

praemissas illorum syllogismorum; concludunt enim ex se gratia formae. Ideo non indigent alia probatione virtute cuius valeat consequentia.⁴⁸¹

6.2.4 Buridan elaborated upon a graduated concept of probative argumentation that was fully consistent with his nuanced concept of knowledge - from the weaker or equivocal to the stronger and proper meaning of *scientia* - as well as with his notion of graded necessity. And demonstration was best suited to disciplines that were considered fully-fledged sciences insofar as they met all the requirements for the highest degree of scientificity, that is necessity, certainty, evidentness.⁴⁸² A demonstrative syllogism was a *probatio simpliciter perfecta*, namely an argumentation producing certain and evident knowledge (*scientia*) of the conclusion starting from certainly known and evident premises. The different kinds of demonstrative syllogisms – demonstration in general, strictly and most strictly speaking – mirrored the different ways of interpreting the words “knowledge of the conclusion” (*scientia conclusionis*) as *communiter*, *proprie* and *maxime proprie*. While the astronomer used demonstrations *communiter dictae*, the geometer used demonstrations *proprissimae et mansivae*.⁴⁸³ However, Buridan also admitted a more relaxed notion of probative or convincing argumentation, namely the dialectical argumentation, whose perfect forms were dialectical syllogism, induction, enthymeme and example. If these four kinds of arguments were considered only according to the substitution criterion (SC), then induction, enthymeme and example were formally invalid and needed to be reduced to syllogism.⁴⁸⁴ If, however, they were addressed from the dialectical vantage point, then syllogism, induction, enthymeme and example were on the same level, since they were all perfect dialectical *probationes*:

⁴⁸¹ Buridanus, *Locis*, 6.3.1, p. 31.

⁴⁸² *QT*, I, q. 16, p. 67.

⁴⁸³ See *SD*, 8.7 and 8.8; in 8.7.5 Buridan offered the example of two demonstrations used in arts, namely the “syllogismus artis” and that “prudentialis”.

⁴⁸⁴ *QT*, I, q. 16, p. 68; cf. Buridanus, *Locis*, 6.1.4 and 6.1.5 for the reduction of the three aforementioned argumentations to syllogism. Similar claims are found in his *Quaestiones in Analytica Priora*, II, qq. 19-22.

Quod aliquam conclusionem esse probatam et notificatam intelligitur dupliciter: uno modo quod tantum sit probata, quod virtute talis propositionis *ille, cui est probata et notificata, assentiat* ei sine formidine de opposito; alio modo potest probari sic, quod non sic ei tantum probata, quod assentiat ei sine formidine, bene tamen tantum quod assentiat ei cum formidine, hoc est, quod de ea habeat opinionem, licet non scientiam [...] Quod aliqua conclusio sit probata in tantum, quod ei assentiatur, licet cum formidine, et hoc per inductionem secundum praedicata per accidens, non oportet fieri inductionem seorsum in omnibus singularibus, sed quod *in pluribus* hoc sufficit [...] Ex his sequitur, quod aliud requiritur ad inductionem in demonstrativis et aliud in dialecticis seu <aliud> ad generandum assensum sine formidine et aliud ad generandum assensum cum formidine.⁴⁸⁵

Hence, none of the four types of dialectical argumentations had priority over the others⁴⁸⁶ nor did any of them need to be reformulated as a formally valid argument, that is, as a syllogism:

Licet in genere argumentationis simpliciter ista tria bene reducantur ad syllogismum tamquam imperfecta ad perfectum, tamen non in genere argumentationis dialecticae. Unde omnes illae quattuor argumentationes syllogismus, inductio etc. sunt aequaliter perfectae argumentationes dialecticae.⁴⁸⁷

Although dialectical argumentations did not produce an undoubted, but only a less intense knowledge of the conclusions, for the aims of dialectic they were perfect

⁴⁸⁵ QT, II, q. 2, pp. 81-83.

⁴⁸⁶ QT, I, q. 16, pp. 67-8; Buridan conceives of dialectical argumentations as non necessary inferences in many places in his *SD*, e.g. 8.4.4.

⁴⁸⁷ QT, I, q. 16, p. 69. Despite the many affinities, Buridan's *QT* should not be considered a mere distillation of the sixth treatise of the *Summulae*. Indeed, there are slight but important differences, as it is the case for the discussion of the various kinds of dialectical argumentation. In the *Locis*, the four kinds of dialectical argumentation are not at the same level and Buridan accepts Boethius' reduction of the species of dialectical argumentations from four to two, performed by subsuming the example under the induction, insofar as the example can be considered an incomplete induction, and of the enthymeme under the syllogism, since it is an incomplete syllogism.

since they provided dialecticians with a reliable type of knowledge, the *opinio*, and with persuasion:

Li argumentatio vel dicitur [...] de his, quae licet *non de necessitate* inferant conclusionem nec *faciunt* notitiam evidentem simpliciter de conclusione, sed bene *persuasionem probabilem et opinionem*. Isto ultimo modo capiendo ‘argumentationem’ argumentatio dialectica dicitur argumentatio.⁴⁸⁸

6.2.5 Prima facie, the differentiation between illative and probative argumentations seemed akin to the distinction between formal and material consequences, which was found in many of Buridan’s writings and mainly in the *Tractatus de consequentiis* (1.4 and 3.1).⁴⁸⁹ And the different kinds of formal consequences therein described, partly agreed with the description of illative argumentation (1) sketched in the *Quaestiones Topicorum*. However, the overlap between consequences and argumentations was not complete, for it did not hold with regard to probative argumentations and material consequences.

In the *Tractatus de consequentiis*, Buridan had distinguished between formal and material consequences on the basis of the substitution criterion (SC), which was a formal criterion for validity.⁴⁹⁰ Simple and ‘as-of-now’ material consequences were

⁴⁸⁸ QT, I, q. 16, p. 68, emphasis mine. A similar idea was found in Buridanus, *Locis*, 6.4.17, on the “Locus a communiter accidentibus”, pp. 82-83; *Ibidem*, 6.5.6, “Locus a maiore”, pp. 104-105, where dialectical topics were qualified as “secundum probabilitatem facientes opiniones vel persuasionem”; see also the “Locus a causa efficiente”, p. 67, where Buridan mentioned the “loci probabiles aut persuasivi”, as well as the “Locus a transsumptione”, in which he mentioned “argumenta dialectica et persuasiva”. See also SD, 8.4.1 and 8.4.2: “In omni demonstratione infertur conclusio ex praemissis necessario et gratia formae, quod non requiritur ad argumentationem dialecticam [...] Quod autem dialectici et rhetores utantur plurimis rationibus quae non sunt necessariae et formales consequentiae est per se manifestum [...] ‘Omnis demonstratio est syllogismus ... et caetera’. Et hoc est quia nulla aliarum specierum argumentationis est necessaria et formalis consequentia, sicut dictum fuit in principio tractatus de Locis Dialecticis”. In his *Quaestiones* on Aristotle’s *Rhetoric* 1.8, the Picardian masters described the peculiarity of the entailment of dialectical argumentative patterns: “Non enim exigitur ad dialecticam argumentationem quod ex tali antecedente sequitur tale consequens necessario et inevitabiliter, sed sufficit quod *ut <in> pluribus*” (emphasis mine). This way of understanding dialectical argumentation bore similarities to Boethius’ arguments that are “probabilia vero ac non necessaria”, to which “facile quidem animus acquiescit, sed veritatis non tenet firmitatem” such as “if she is a mother, she loves her child” (Boethius, *De topicis differentiis*, bk. 1, 1180D).

⁴⁸⁹ See also SD, 1.6.1 and the *Quaestiones in Analytica Priora* (II, q.19).

⁴⁹⁰ In the TC Buridan said that formal and material consequences were valid consequences, the formal one holding in virtue of its form, which consisted of its syncategorematic terms. Whilst a material consequence was that to which “non omnis propositio consimilis in forma <quae formaretur> esset

formally invalid consequences; or, alternatively, they did not hold formally. Nevertheless, they were non-formally valid consequences since they held materially: material consequences, such as induction, enthymeme, and example, “tenent solum gratia materiae [*scil.* the categorematic terms]”; and they needed to be reduced to formally valid consequences to be evident.⁴⁹¹ Despite some similarities between dialectical arguments and material consequences, it did not seem possible to conflate material consequences and probative arguments. The validity of formal and material consequences was indeed evaluated according to the (formal) substitution criterion (SC), while convincing argumentations were considered to be valid or invalid apart from the necessity of their consequential link. The validity of probative arguments, indeed, emerged to be judged through the informal criterion of the probativeness (PC), which could not be reduced to the formal validity criterion (SC).⁴⁹²

If material consequences were tantamount to probative arguments, it would be arduous to harmonize the priority Buridan accorded to formal consequences - such as syllogisms over material consequences - with Buridan's claim that dialectical argumentations (namely syllogism, induction, enthymeme and example) were all on the same level. And many difficulties would arise in connection with demonstrative and dialectical syllogisms. Indeed, both had a syllogistic form, thus they were formal consequences logically speaking. However, epistemologically they were both probative argumentation, thus they would be at the same time formal and material consequences. The problem then would have been to determine whether demonstrative and dialectical syllogisms held materially, insofar as they were probative argumentations and hence material consequences. Or rather if they held in virtue of their form, since they were formal consequences too. Moreover, it should

bona consequentia, vel, sicut communiter dicitur, quae non tenet in omnibus terminis forma consimili retenta” (TC 1.4).

⁴⁹¹ TC, 1.4.4 and TC, 3.1.

⁴⁹² The autonomy of these two criteria permitted one to evaluate the same argument according to two different approaches, logical and epistemological, and this scrutiny could arrive at divergent conclusions. For example, an equivalence was said to be valid from the logical perspective (*bona consequentia*), but invalid from an epistemological viewpoint. Moreover, the set of valid probative arguments was thus enlarged to comprehend formally valid reasoning, like demonstrative and dialectical syllogisms, as well as reasoning invalid on formal grounds, such as enthymemes or examples.

be explained how a demonstrative syllogism could be reduced to a formal consequence, a procedure which was required for any material consequence. And furthermore, why this reduction should be operated: indeed, a demonstrative syllogism unlike any material consequence, was evident by itself. In addition, from the logical viewpoint a syllogism was just a formally valid argument, whereas from the epistemological vantage point, syllogisms differentiated in perfect argumentation and dialectical argumentation respectively. Moreover, the same syllogism (“*consimilis forma*”) could be both dialectic and demonstrative at the same time for different agents.

6.3 Buridan’s dialectic and its legacy.

6.3.1 Buridan’s approach to dialectical argumentation which he developed in the *Quaestiones Topicorum* stimulates interesting reflections. From a “logical” and methodological viewpoint, the disentanglement of dialectical and logical necessity potentially enlarged the area of competence of dialectic, and blurred the frontiers between dialectic and rhetoric. Indeed, it permitted dialectic to focus not only on dialectical syllogism, but also allowed for theoretical analysis on the status, role and value of formally invalid but probatively valid argumentations (*probationes*), which were later qualified as *consequentiae probativae tantum*.⁴⁹³ Traditionally, this kind of probable reasoning, whose premises merely supported the conclusion, was relegated to rhetoric. The notion of *ratio probabilis* seemed to have undergone modifications in Buridan’s way of handling it, since he used the term ‘*probabilis*’ for qualifying not only doxastic premises, but also the inferential relation holding between the premises and the conclusion of arguments. If it is true that “medieval philosophers, not just mediaeval logicians, recognized in practice that the consequence provides the inferential force of an argument”,⁴⁹⁴ a claim that seems to

⁴⁹³ See Ashworth, “Le syllogisme topique au XVI^e siècle”, p. 412.

⁴⁹⁴ King, “*Consequence as Inference*”, p. 126, and few lines below “Given true premises and a valid inference, of course, the result is a sound argument; nothing but the consequence can play the role of the latter”.

find some corroboration in Buridan's terminology,⁴⁹⁵ then the *consequentia probabilis* underwrote probable arguments. But unlike the *consequentia necessaria* it did not preserve the truth nor it did hold in all circumstances. Whence, it was labelled as probable an argument that fell short of necessity⁴⁹⁶ and that, nevertheless, was dialectically valid.

6.3.2 Unfortunately, in the above passage of the sixteenth *Quaestio* Buridan did not provide his readers with any example of a *consequentia probabilis* nor of a *ratio probabilis*, therefore we have to look to his other works to elucidate these notions. A good place for such references are his *Summulae*.⁴⁹⁷ An interesting remark is found in the fourth chapter of the seventh treatise (7.4.5), where Buridan dealt with the fallacy of the consequent. Within this discussion, Buridan expanded upon the notion of consequence, which could be either a conditional sentence or an argument, and its bipartition into false and true consequences. An example of a probable and rhetorical consequence or argument (*consequentia probabilis et rhetorica*) was "if he is an adulterer, then he is well-groomed."⁴⁹⁸ The non-necessary entailment between the antecedent and the consequent of dialectical arguments was also acknowledged in the *Quaestiones in Rhetoricam*, in which Buridan affirmed that for the validity of such argumentative patterns it was required that the consequent followed from the antecedent not necessarily and *inevitabiliter*, but merely in most of cases (*ut <in>*

⁴⁹⁵ At times Buridan spoke of "locus probabilis consequentiae" and "locus necessariae consequentiae", and in *QT* I, q. 16 he said that an illative argumentation was perfect since the consequence, *through* which it concluded, was necessary ("quia consequentia, qua infert suam conclusionem, est necessaria").

⁴⁹⁶ Buridanus, *Locis*, 6.1.4 (ed. Klima pp. 394-5): "Multi sunt syllogismi qui nullatenus sunt argumentationes, nam ad argumentum vel argumentationem requiritur *cum necessitate vel probabilitate consequentiae* quod consequens probetur per antecedens, ut patet per definitionem argumenti". Boethius qualified as "probable" not premises, but arguments.

⁴⁹⁷ Especially the sixth treatise on the *locis*. For example, the treatment of the *loci* from the efficient cause and its effect, which were not "to be deemed to be necessary; because of that, however, they should not be dismissed, since it is enough for them to be probable or persuasive" (Buridanus, *Locis* 6.4.10, p. 67, English translation is mine). Or the analysis of the *loci* from "concurrent accidents", some of which were grounded on a *locus probabilis consequentiae* (*Ibid.*, 6.4.17, p. 82).

⁴⁹⁸ *SD*, 7.4.5; here Buridan spoke of *consequentiae probabiles et rhetoricae*. In their discussions about the fallacy of affirming the consequent, Aristotle and, later, Peter of Spain, had explicitly assigned this kind of consequence to the field of rhetoric: Aristotle, *Sophistical Refutations*, 5, 167b8-13; Peter of Spain, *Tractatus*, VII.158, p. 171.

pluribus). Therein, the Picardian master offered an example of a probable argument based on length:

Non enim exigitur ad dialecticam argumentationem quod ex tali antecedente sequitur tale consequens necessario et inevitabiliter, sed sufficit quod *ut <in> pluribus*. Ponamus ergo quod Socrates taxillator existens et communiter* errabundus de nocte fuerit in domo Platonis et inspexerit unum fardellum, et iste fardellus per furtum ablatum sequenti die inveniatur in domo Socratis ostio clauso et Socrate habente clavem. *Concludetur probabiliter* quod Socrates fardellum furatus est. Antecedente enim sic circumstantiato existente vero, consequens *ut in pluribus* esset verum unde *tanta esset probabilitas istius argumenti* quod iudex poneret Socratem in tormentis. Possibile est tamen quod Socrates ista nocte cubuit in taverna Roberti de mane in lecto inventus et quod ostium domus erat clausum ut Socrates non posset ipsum aperire qua[...]tur *probare probabiliter* quod Socrates fardellum non est furatus.⁴⁹⁹

These examples testify to the semantic slipping of the term *probabilis*, from the premises alone to the quality of the entailment and to the argumentation itself, which in turn might be connected with the modification in the notion of probability introduced by the Modists. Indeed Buridan's notion of probability seemed to embrace not only the endoxic or epistemic conception, but also the semantic and protofrequentist conception according to which probability relies on objective features of the world.⁵⁰⁰

6.3.3 All this had epistemological implications. As noticed above, probable argumentations produced a less intense knowledge of the conclusion than demonstrations. The probable premises of dialectical arguments were not known but merely opined: the agent assented to them *cum formidine* and *infra latitudinem*

⁴⁹⁹ I. Buridanus, *Quaestiones in Rhetoricam* (hereafter abbreviated as *QR*), 1.8, in E. B. Preben-Hansen (ed.), accessed April 28, 2016, <http://www.preben.nl/BuridanRH.pdf>.

⁵⁰⁰ For Buridan a proposition is probable since it is in itself more evident than its opposite, and this evidence produces an intentional and subjective compelling that induces philosophers to accept it: "Per hoc autem, quod dicitur probabilis omnibus vel pluribus etc., differt ab illis propositionibus, quae non possunt convenienter assumi ad probandum aliquid propter hoc, quod non sunt evidetiores quam earum oppositae" (*QT*, I, q. 14, p. 60).

certitudinis et evidentiae simpliciter. Accordingly, dialectical argumentations did not produce *scientia* but mere opinion about the conclusion, and they engendered persuasion.⁵⁰¹ These claims about dialectic found justification in Aristotle's definition of dialectical problems and dialectic's utilities given in the *Topics*, which committed dialectic to know and act:⁵⁰²

primo enim Topicorum dicit Aristoteles problema dialecticum speculationem esse contententem ad electionem vel fugam quantum ad activam vitam et ad veritatem vel scientiam quantum ad speculativam; idcirco bene dictum est "sicut dux est salvator exercitus, sic ratiocinatio cum eruditione est dux vitae", scilicet humanae, tam contemplativae, id est speculativae, quam activae.⁵⁰³

In virtue of its instrumental function, dialectic could play an important heuristic role in many disciplines. Along with demonstrations in general dialectical argumentations could serve those sciences, such as physics or natural philosophy, which did not demand *scientia* strictly speaking, but only *communiter* and *large scientia* for they produced a less rigorous kind of knowledge or opinion.⁵⁰⁴ Even though it was commonly acknowledged that dialectic produced opinion and that it dealt with ethical issues, these claims now acquired a different, heightened significance against the background of Buridan's philosophy and subdivision of sciences. Their importance and originality could be fully understood only within the Buridanian epistemological and psychological framework. Strictly related to dialectic's applicability to ethical questions was its commitment to seeking probable persuasion (*persuasio probabilis*). Its achievement perfectly legitimated the acceptance with full rights of induction of enthymeme and example amongst dialectical arguments. Unlike many medieval logicians, in the above passage of question 16 Buridan did not directly associate informal techniques of persuasion with rhetoric: enthymemes and examples fell primarily under the domain of dialectic and

⁵⁰¹ Cf. *SD*, 8.4.1.

⁵⁰² Aristotle, *Topics*, I.2, 101a33-35 and I.11, 104b1-2.

⁵⁰³ *SD*, Prohemium.

⁵⁰⁴ Moreover, dialectical argumentations such as induction and example were useful for stating the first principles used in natural philosophy, such as that all pieces of coal are hot (see *SD*, 8.5.4 and the parallel passages in *SD*, 6.1.4 and in *Quaestiones in Analytica Priora*, II, qq.19-20).

secondarily under rhetoric.⁵⁰⁵ And this squared with Buridan's view according to which rhetoric, along with poetry, was a part of dialectic.⁵⁰⁶

As *docens*, dialectic could speculate about both formal and informal modes of reasoning, and could teach us how to construct necessary as well as contingent arguments. With regard to the *utens*, Buridan's claims elevated the '*probatio*' to the level of the '*illatio*' in those cases in which the argumentation was ordered towards producing knowledge. Rather than the *illatio*, it was instead the *probatio* that proved more apt, useful and employable for constructing proofs in many disciplines. Buridan's distinction between different ways of considering argumentations expanded the range of valid argumentations, for it bestowed upon probable arguments the same degree of validity as the necessary arguments, at least from the epistemological angle.

Conclusion

The *Quaestiones Topicorum* of John Buridan constitute a rupture in the reception of the Aristotelian *Topics* and, more generally, in the understanding of dialectic. All the 13th century commentators of the *Topics* agreed in considering dialectical syllogism the subject-matter of dialectic and the *Topics*. Buridan broke this continuity and assigned the dialectical argumentation to be the object of study of dialectic and the *Topics*. And in so doing, he fused the Boethian tradition of the *Topics* with the Aristotelian. Buridan indeed read the opening lines of the *Topics* in the light of

⁵⁰⁵ On the use of enthymemes in rhetoric see *Quaestiones in Analytica Priora*, II, q. 22.

⁵⁰⁶ Buridanus, *Locis*, 6.5.9, p. 111. In the prologue of his *Quaestiones super Ethicorum*, Buridan proposes the idea of a double logic or dialectic, namely the general logic or dialectic (*simpliciter*), teaching us how to know a hitherto doubtful truth, and a special logic subordinated to *dialecticae simpliciter*, namely the *dialectica moralis* "quae docet modum, quo simul et dubium et verum invenitur, et appetitus sic afficitur et disponitur, ut determinet vel non impediat intellectum ad concedendum conclusum". Buridan connected this moral dialectic with the instrumental part of moral philosophy. Cf. Aristotle, *Rhetoric*, I.1, 1354a1 "Rethorica assecutiva dialectice est". On the relationship between dialectic and rhetoric before Buridan see Marmo, "Suspicio"; J. Biard, "Science et rhétorique dans les Quaestiones sur la Rhétorique de Jean Buridan", in G. Dahan-I. Rosier-Catach, *La Rhétorique d'Aristote, traditions et commentaires de l'Antiquité au XVII^e siècle*, Paris: Vrin, 1998, pp. 135-152; D. Lines, "Sources and Authorities for Moral Philosophy in the Italian Renaissance: Thomas Aquinas and Jean Buridan on Aristotle's *Ethics*", in J. Kraye-R. Saarinen, *Moral Philosophy on the Threshold of Modernity*, Dordrecht: Springer, 2005, pp. 7-29.

Boethius. Accordingly, he interpreted the Stagirite's claim that the dialectical method expounded on in the *Topics* was useful for being well equipped with *sylogismoi* as saying that the treatise dealt with dialectical argumentation in general, not with dialectical syllogism alone. And by introducing the notion of *argumentatio*, he was making room to assign an active role to the *loci* in dialectical reasoning. Within the Buridanian framework presented above, *argumentatio* emerged as a complex concept whose different meanings Buridan kept separate. The logical facet of *argumentatio* was the *illatio*, whilst its epistemological facet was the *probatio*. The proof included demonstrative syllogism and dialectical argumentations.

To acknowledge dialectical argumentation, and not dialectical syllogism alone, as the object of study of dialectic entailed an extension of the field of inquiry of this discipline unto non-formal and informal arguments. Dialectically valid arguments were arguments apt at producing *opinio* and *persuasio probabilis*, and they could indifferently be formally valid arguments or informally valid. Persuasion, indeed, was often achieved through rhetorical tools rather than merely logical techniques or tools, through examples rather than through syllogisms. All this inclined dialectic more toward cognitive psychology than towards pure logic.

Buridan's innovation about the subject-matter of the *Topics* did not have a wide reception and remained a minority option besides the common view. Indeed in the 14th century, Marsilius of Inghen and Hartlevus de Marca alone held this view. And in the following century, only the anonymous masters of Prague and Cracow (A.39-40, A.43), along with a Leuven commentator (A.48), adopted this Buridanian innovative opinion. Despite the restricted support it received, Buridan's view about dialectic and the *Topics* took fruitful root in some minds, and provided some commentators with a theoretical (and epistemological) foundation for taking discussions about dialectic to the next level. As happened in Cracow.

Chapter Seven. In Albert's or Buridan's long shadow? Reading Aristotle's *Topics* in Fifteenth century schools.

7.1 15th century schools of thought and the *Topics*.

More than in the previous epochs, in the 15th century the intellectual history intersected with educational and institutional history, and the exegetical work of commentators reflected that interplay. Indeed, the commentaries on the *Topics* produced throughout the various decades in several Universities, often but not always reflected the philosophical trends prevailing therein. And in their turn, the different intellectual orientations of Universities were usually strictly connected with statutory prescriptions. As is reasonable, the adherence to a specific school of thought influenced the understanding of Aristotle's work and often provided commentators with peculiar exegetical backgrounds. This clearly appears, for example, in the replies that 15th century commentators on the *Topics* offered to the question concerning the subject matter of the *Topics*, and, more generally, of dialectic. Usually, indeed, these answers reflected intellectual milieu of the University. Mainly, but not exclusively, Realists authors, who adopted a more formal or logical approach to dialectic, responded that this discipline dealt with dialectical syllogism, namely with a formally valid reasoning. For authors influenced by Buridanism, their overall philosophical orientation led them to endorse an epistemological rather than a mere logical approach to the issue and to focus their attention on the *probatio* rather than on the *illatio*. Accordingly, they held that the object of study of dialectic was dialectical argumentation. Thus, they allowed dialectic to study and make use not only of dialectical syllogism, but also of induction, enthymeme and example, and more generally of formally invalid arguments. This view not only expanded the spectrum of dialectical argumentative strategies, but it also provided the theoretical framework for developing a distinction between *illatio* and *probatio* and for allowing room for arguments that were not merely illative nor illative and probative, but only probative.

As we have seen, in his description of the questioner's task at the opening of the first book of the *Topics*, Aristotle had affirmed that the treatise considered dialectical deduction:

Propositum quidem negotii est methodum invenire a qua poterimus *syllogizare* de omni problemate ex probabilibus [...] Primum igitur dicendum quid est *syllogismus* et quae eius differentiae, quatinus sumatur dialecticus syllogismus; hunc enim quaerimus secundum propositum negotium.⁵⁰⁷

15th century commentators interpreted differently the general meaning and the individual words of this sentence. Some understood *negotii* to mean "dialectical science",⁵⁰⁸ while others as "operatio intelligibilis".⁵⁰⁹ Many borrowed Albert's metaphorical exegesis of *methodum* as a "short and compendary way". However, what is more noteworthy for current purposes, is the interpretation they offered of the terms *syllogizare* (συλλογίζεσθαι) and *syllogismus* (συλλογισμός), which directly indicated the subject matter of the *Topics* and related to the more general question regarding the object of inquiry (the *subiectum adaequatum* or *attributionis*) of dialectic. Although 15th century commentaries on the *Topics* often offered standard analysis and did not offer elaborate reflections, their exegeses of the above sentence were

⁵⁰⁷ Aristoteles, *Topica*, 1.1 100a19-24, *AL*, p. 5, ll. 7-8, (emphasis added).

⁵⁰⁸ This exegesis was proposed by Arnoldus de Tongern (*Reparationes libri Thopicorum Aristotelis*, in *Id.*, *Epitomata sive reparationes logicae veteris et novae Aristotelis iuxta viam et expositionem [...]* Alberti doctori Magni [...] ad utilitatem et uberiores profectum scolarium ac artium Baccalauriorum bursam Laurentii vulgo appellatam, Coloniae 1496, fol. Si-ii (hereafter A.44)); Gerardus Henrici de Harderwijk (*Commentaria in octo libros Thopicorum*, in *Id.*, *Commentaria in quattuor libros nove logice secundum processum burse laurentiane Coloniensis ubi doctrine Alberti magni peripateticorum veracissimi interpretis sectatores propagatoresque fidelissimi*, Coloniae 1493 (hereafter abbreviated as A.64); Petrus de Rivo, *Lectura super libros Thopicorum I-II*, G= Greifswald, Bibliothek des Geistlichen Ministeriums, 34. D. IX, ff. 134ra-148rb; O= Berlin, Staatsbibliothek, Ms. Magdeburg 227, ff. 322ra-362rb (hereafter abbreviated as A.52a); Georgius Bruxellensis, *Logica magistri Georgii insertu textu Bricoti*, Paris 1493, (hereafter abbreviated as A.56); Anonymous, *Circa primum Thopicorum*, (Frankfurt am Main, Universitätsbibliothek Johann Christian Senckenberg, ms. Praed 47, *Circa primum Thopicorum*, ff. 144ra-162ra and ms. 63, *Circa initium primi libri Thopicorum*, ff. 372ra-414va (corresponding to Green-Pedersen's catalogue A.45); this anonymous commentary in question-form draws upon Albert the Great's exposition, at times quoting or summarizing Albert's text literally).

⁵⁰⁹ Lambertus de Monte Domini (*Copulata pulcherrima in novam logicam Aristotelis [...] secundum viam preclarissimi philosophi ac fundatissimi logici sancti Thome Aquinatis quorum frequens exercitium est apud magistros in florentissimo studio Coloniensi bursam montis regentes*, Coloniae 1493, (hereafter A.68)); Johannes Versoris (*Quaestiones super libros Thopicorum*, in *Id.*, *Super omnes libros nove logice*, Köln 1494 (Repr. Frankfurt am Main: Minerva, 1967; hereafter A.35)).

interesting since they usually revealed the philosophical orientation of an author. Which, in its turn, involved peculiar epistemological, metaphysical and logical frames. What exactly did “dialectical deduction” mean? If the authors aligned themselves with the Realist trend and more specifically with Albert the Great, who was the only continental ‘Realist’ author to comment on the *Topics* before the 15th century, they answered that the proper object of dialectic was dialectical syllogism. For those commentators influenced by Buridan⁵¹⁰ and his followers, dialectical argumentation was the proper object of the study of dialectic.

7.2 Parisian Masters and the *Topics*.⁵¹¹

7.2.1 After the ending of the “saeculum Buridani”⁵¹² (ca. 1370-1400) and from the beginning of the 15th century, Realism gradually gained the advantage in Paris. During the “desolation of the University of Paris” (1407-37), Johannes de Nova Domo was the pioneer of the Albertist trend, and famous masters such as John Versoris advocated Realist views. From the 1440s to the 1474 condemnation of nominalism, however, the “via moderna” was still allowed along with the “via antiqua”. After 1481, the “via Nominalium” was admitted again, and nominalist professors taught along with Albertists, Thomists and Scotists.

⁵¹⁰ On Buridan’s influence in Europe see Michael, *Johannes Buridan*, pp. 321-398.

⁵¹¹ See A. B. Cobban, *The Medieval Universities. Their Development and Organization*, London 1975 (and the bibliography mentioned there). On the Parisian Wegestreit see A. L. Gabriel, “‘Via antiqua’ and ‘via moderna’”, pp. 457-48; Z. Kaluza, *Les querelles doctrinales à Paris. Nominalistes et Réalistes aux confins du XIV^e et du XV^e siècles*, Bergamo: Pierluigi Lubrina, 1988; *Id.*, “Les débuts de l’Albertisme tardif (Paris et Cologne)”, in M.J.F.M. Hoenen-A. De Libera, *Albertus Magnus und der Albertismus: Deutsche philosophische Kultur des Mittelalters*, Leiden-New York-Köln: Brill, 1995, pp. 207-295; *Id.*, “La crise des années 1474-1482: l’interdiction du nominalisme par Louis XI”, in M.J.F. Hoenen-J.H.J. Schneider-G. Wieland, *Philosophy and learning: universities in the Middle Ages*, Leiden – New York – Köln: E. J. Brill, 1995, pp. 293-327; *Id.*, “Les étapes d’une controverse. Les nominalistes et les réalistes parisiens de 1339 à 1482”, in A. Le Boulluec, *La controverse religieuse et ses formes*, Paris: Cerf, 1995, pp. 297-317.

⁵¹² In a document produced in 1425 at the Faculty of Arts of the University of Cologne, the period at the end of the 14th century, during which Buridan’s doctrines prevailed at Paris university, is labelled the “saeculum Buridani”. According to Kaluza (“Les étapes d’une controverse”, p. 307), Buridan’s influence ended when Peter of Ailly left the chancellery, in 1395, while Michael (*Johannes Buridan*, p. 328) postpones the end-date to 1410ca. For the text of 1425 document see F. Eherle, *Der Sentenzenkommentar des Peter von Candia des Pisaner Papstes Alexanders V. Ein Beitrag zur Scheidung der Schulen in der Scholastik des vierzehnten Jahrhunderts und zur Geschichte des Wegestreits*, Münster in Westf.: Aschendorff Verlag, 1925, pp. 281-285, esp. p. 284.

According to Green-Pedersen's catalogue, nine 15th century manuscripts containing commentaries on Aristotle's *Topics* produced by Parisian masters - anonymous as well as famous - are extant. Authors seemed to draw widely on the same exegetical tradition, share common ideas and influence each other in different ways, even though it is hard to determine exactly the interactions and relations among their writings or to tell how much impact a particular author had on another. Indeed, at times commentators just followed the common argumentative line; at other times they reshaped and adapted works from colleagues. Normally, these writings were included in sets of commentaries on Aristotle's *Organon* and the majority of them covered only the first four books of the *Topics*, as prescribed by the Statutes. Typically, commentaries dating from the beginning to the third quarter of the century were in question-form, whilst those written in the last quarter were paraphrases accompanied by *dubia* and responses.

7.2.3 The first known Parisian 15th century work was the *Quaestiones Topicorum* of the obscure Iohannes Sucket, which already exhibits the basic characteristics common to almost the totality of writings on the *Topics* produced at the Parisian University during the 15th century.⁵¹³ At the very beginning Sucket treated the customary issue about the epistemological status of dialectic "sive Thopica", and offered a standard analysis of the matter at hand. He accepted the literal interpretation of the opening lines of the *Topics* proposed by "omnes antiqui expositores", and accordingly he claimed that dialectical or topical syllogism was the proper subject of the *dialectica docens*. He also sided with his predecessor in emphasizing the dissimilarities between dialectic and rhetoric, which differed in virtue of their scope and of their diverse argumentative strategies. Dialectic aimed at producing "fides" and opinion in theoretical issues and it used syllogisms and inductions, the syllogism being more perfect than the induction. Whilst rhetoric was

⁵¹³ I. Sucket, *Quaestiones Topicorum*, Augsburg, Staats- und Stadtbibliothek, 2° Cod. 342b, ff. 128ra-143va (hereafter A.38). The manuscript containing this question-form commentary was copied by Arnoldus Simonis from Den Haag in 1429, when he was a student in Paris in 1429; see C. Lohr, "Medieval Latin Aristotle Commentaries. Authors: Johannes de Kanthi-Myngodus", in *Traditio*, 27 (1971), pp. 251-351, esp. p. 285; Green-Pedersen, *The tradition*, pp. 402-403, A.38. Similar ideas are found, for example, in Johannes Hannon (Hanno(t), Hennon)'s questions on the *Topics*, which were written in 1480ca.

concerned with practical questions, consequently it made use of enthymemes and examples, since these were more apt at producing *persuasio*

Habitudines locales possunt dupliciter considerari. Uno modo in re et absolute, et sic eas considerat metaphysicus. Alio modo possunt considerari secundum quod sunt confirmative argumentorum et hoc dupliciter. Primo modo secundum substantiam, et sic eas considerat Boecium et non fecerit Rethoricam distinctam a dyalectica, quia secundum substantiam eadem sunt maximae argumentorum rethoricorum et dyalecticorum. Secundo modo possunt considerari quantum ad substantiam et usum sive applicationem, et isto modo consideravit Aristoteles. Et quia diversimode applicantur argumentis dyalecticis et rethoricis, ideo fecit distinctas scientias diversimode vero quia in dyalectica utitur sive procedit^{ur} per syllogismum et inductionem. In rethorica vero per enthymema et exemplum. Similiter etiam in dyalectica circa universalem* materiam indifferenter* et in rethorica circa personam* rationalem* et actus ipsius. Sic etiam quia in dyalectica ut in pluribus quantum ad speculabilia, sed in rethorica magis quantum ad practica moralia. Postremo in dyalectica quantum ad generandum fidem et opinionem in potentia cognitiva, sed in rethorica quantum ad persuasionem et favorem sue partis et ad indurationem* partis adverse.⁵¹⁴

The general framework of Suckett's exegesis of the text was Realist, and neither the terminology employed nor the pro and con arguments proposed betrayed any influence of Buridan. Albert the Great's interpretation of Aristotle's text constantly appeared in the background of Suckett's commentary, even though perhaps Suckett's acquaintance of Albert's ideas was not derived from a direct reading of the *Doctor Universalis*.

7.2.4 According to Green-Pedersen, Suckett's commentary was used by John Versoris, whose text on the *Topics* was "by far the most wide-spread one from the 15th century". Versoris' work was part of a set of commentaries on the whole Aristotelian *corpus* of logical writings and it should have been composed around the

⁵¹⁴ A.38, I, q.3, f. 128rb; cf. also I, q. 12, f. 133ra-rb.

1430s or 40s.⁵¹⁵ On the basis of the textual evidence found at the beginning of the *Topics*, Versoris thought of dialectical syllogism as the object of study of dialectic “sive thopica”. In his description of the *dialectica docens*, he exhibited a doctrinal congruence with Aquinas’ view on logic. Versoris indeed considered dialectic to be a rational science whose subject was the being of reason (*ens rationis*), namely dialectical syllogism, and whose role it was to direct the intellect. And he sided with Albert the Great in considering the distinction between syllogisms as analogical.⁵¹⁶ Similarly to Sucket, Versoris too pointed out that dialectic was tied-up with producing opinion, while rhetoric was tied-up with persuading the hearer. In order to reach their different goals, these disciplines used different kinds of arguments: induction and syllogism belong to dialectic, enthymeme and example to rhetoric.⁵¹⁷ Approximately from the same period we find another question-form commentary, which exceptionally covered the first six books of the *Topics* and was included in a manuscript containing commentaries on Aristotle’s logic, dating from 1442. The scribe assigned the authorship of the commentary on the *Posterior Analytics* to Peter Richeri and it is not unlikely that Peter might be the author of all the commentaries on Aristotle’s logical works contained therein.⁵¹⁸ His commentary on the *Topics* seems to heavily draw from Albert the Great’s paraphrases. Albert was named more than once, and his text was re-elaborated upon and reshaped to accommodate the question format. Peter’s argumentations proceeded along the same lines as Sucket, Versoris and many other authors of his age. He agreed with them that the subject of dialectic was dialectical syllogism, as Aristotle himself had said at the beginning of

⁵¹⁵ Green-Pedersen supposes that the original work covered only books from one to four and that the questions on the last four books are not from the pen of Versoris: Green-Pedersen, *The Tradition*, p. 322 and pp. 400-401, A.35. On Versoris see O. Weijers, *Le travail intellectuel à la Faculté des arts de Paris: textes et maîtres (ca. 1200-1500): J (à partir de Johannes D)*, Turnhout: Brepols, 2003, Vol. V, pp. 170-176, esp. p. 170; P. Rutten, “Secundum processum et mentem Versoris: John Versor and His Relation to the Schools of Thought Reconsidered”, in *Vivarium* 43 (2005), pp. 292-336; Wöhler, *Dialektik*, pp. 174-180.

⁵¹⁶ A.35, book I, q. 1, fol. i4ra-rb.

⁵¹⁷ *Ibid.*, 4rb-va.

⁵¹⁸ Petrus Richeri, *Quaestiones super libros Topicorum*, Oxford, Bodleian Library, ms. Canon. Misc. 486, ff. 116ra-144vb (hereafter abbreviated as A.37). Peter was master of Arts in Paris, three times rector of the Parisian university (in 1436, 1441 and 1443), and then became master of theology, in 1451. See Green-Pedersen, *The Tradition*, p. 402, A.37; O. Weijers, *Le travail intellectuel à la Faculté des arts de Paris: textes et maîtres (ca. 1200-1500): P*, Turnhout: Brepols, 2007, Vol. VII, pp. 223-5; T. Sullivan, *Parisian Licentiates in Theology, A.D. 1373-1500: A Biographical Register*, Vol. 2. The Secular Clergy, Leiden: Brill, 2011, pp. 474-475.

the book. A point of Peter's exposition deserves a special mention. Unlike his colleagues, Peter offered a rather unusual and lengthy, although not original, elucidation of the Aristotelian definition of *probabilia* (ἐνδοξα). The Parisian master indeed proposed a slightly modified version of Albert's subjective or epistemological-endoxical probability along with Boethius of Dacia's semantic interpretation of probability. By reshaping Boethius' definition, Peter affirmed that a probable proposition was that "in cuius subiecto est proprietas habilitans ipsum ad praedicatum participandum, non tamen necessitans, quia propositio talis est cum formidine de opposito".⁵¹⁹

In this gallery, Randulphus Boissel's work, written in Paris in 1454 fitted perfectly.⁵²⁰ In his question-commentary on book I-IV of the *Topics*, he argued that dialectical syllogism was the subject-matter of dialectic, by advancing trite arguments in favour of his view. In the first question, which concerned the issue of whether dialectic was a real science separated from the other disciplines belonging to logic, Randulphus departed from his Parisian colleagues on one point. Within the frequently raised *dubium* concerning the differences between Aristotle's and Boethius' *thopicae* - which implied the question about the relation between dialectic and rhetoric - Boissel made an interesting claim which had a Thomistic flavour. Like almost all of the commentators, he affirmed that dialectical syllogism and induction were the dialectical instruments for producing *opinio*. But unlike his colleagues, he endorsed the Thomistic view that rhetoric "assecutiva est dyalecticae", as stated in the first line of Aristotle's *Rhetoric*, and that enthymeme and example were used in rhetoric for generating *suspicio*.⁵²¹

⁵¹⁹ A.37, I, q.2, f. 117va-vb, here 117va.

⁵²⁰ According to Sullivan, Ra(n)dulphus Boissel (or Boyssel) obtained his licence in theology in 1465 and was *magistratus* in the following year; he "upheld the realist position in the matter of future contingents". According to Green-Pedersen, Boissel's commentary on the *Topics* is an adaptation of Versoris' text, especially books II to IV. The only copy of his work is the manuscript Conv. Soppr. E. 6. 997, fol. 179ra-208va, preserved at Florence National Library. Sullivan, *Parisian Licentiates*, p. 95; Green-Pedersen, *The Tradition*, p. 407, A.47.

⁵²¹ "Rethorica tamen ut ipse in principio suae Rethoricae [scil. *Rhet.* I.1 1354a1] dicit assecutiva est dyalecticae quia id quod considerat dyalecticus universaliter, rethor considerat particulariter. 'Unde sillogismus rethoricus generat suspicionem, dyalecticus vero opinionem certiolem suspicionem' ideo rethorica assecutiva dyalecticae ex parte finis assignatur etiam ex parte instrumenti quia rethorica utitur emptimemate et exemplo, et dyalectica sillogismo et inductione" (f. 180ra-rb). On *suspicio* and *persuasio* in connection to rhetoric see Marmo, "Suspicio".

In the third quarter of the 15th century, a group of authors, some more known than others – the former including Christianus Foliot, the latter including Thomas Bricot and Peter Tartaretus – commented upon the Aristotelian *Organon* and the first four books of the *Topics*. Their paraphrastic commentaries, which were integrated with *dubia* and questions, did not introduce any significant innovation. Thus, the fifteenth century closed as it opened.

7.3 The University of Cologne: Realism and the *Topics*.⁵²²

7.3.1 At the end of the 14th century, the University of Cologne had a Buridianian orientation and this intellectual setting was reflected in the commentary on Aristotle's *Topics* written by Hartlevus de Marka (†1390), who was *magister regens* and the first rector of that University, in 1389. After his studies in Prague, and his teaching activity in Vienna and Heidelberg, Hartlevus moved to Cologne (1388ca), where he may have written his *Quaestiones* on the *Topics*. His presence and teaching activity in Cologne might render plausible the dating of his commentary on Aristotle's *Topics* to this period, as suggested by the colophon at the end of the Erfurt manuscript which preserves Hartlevus' commentary.⁵²³ From the very beginning

⁵²² According to the 1389 statutes of the Arts' Faculty, Buridan's *Summulae* were lectured on for a period of 3 months (cf. Von Bianco, *Die alte Universitaet Köln*, appendix VII, pp. 66-67 and 71). The influence of Buridan on Cologne University was due to the fact the Cologne statutes were modelled on those from Paris University, which at that time had a Buridianian setting: see Kaluza, "Les débuts". The secondary literature on Cologne University in the 15th century is vast, more bibliographical references can be found in: A. L. Gabriel, "'Via antiqua' and 'via moderna'"; G.-R. Tewes, *Die Bursen der Kölner Artisten-Fakultät bis zur Mitte des 16. Jahrhunderts*, Köln-Weimar-Wien 1993; M.J.F.M. Hoenen "Via antiqua and Via moderna in the fifteenth century: doctrinal, institutional, and church political factors in the Wegestreit", in R. L. Friedman-L. O. Nielsen, *The medieval heritage in early and modern metaphysics and modal theory, 1400-1700*, Dordrecht: Springer, 2003, pp. 9-33; C.H. Kneepkens, "How to prepare for a BA in the Late Middle Ages: Reparationes or Study Aids for Logic", in L. Cesalli-N. Germann- M.J.F.M. Hoenen, *University, council, city. Intellectual Culture on the Rhine (1300-1550)*, Turnhout: Brepols, 2007, pp. 63-95, (hereafter abbreviated as Kneepkens, "How to prepare").

⁵²³ "Et sic est finis huius questionis; Deo laus. Expl. Quest. quatuor libror. top. lecte a mag. Hart. de Marcka in studio Coloniensi, finite et complete a. D. M° CCC^{mo} XC^{mo} ipso die b. Gregorii pape hora 4° post meridiem" (Erfurt/Gotha, Universitäts- und Forschungsbibliothek, ms. 4° 270, fol. 117va, cf. W. Schum, *Beschreibendes Verzeichniß der Amplonianischen Handschriften-Sammlung zu Erfurt*, Berlin, 1887, p. 514). Hartlevus' commentary covers the books I, II, VI, and VIII, which according to Green-Pedersen (*The Tradition*, p. 90), were the only books prescribed in the statutes of the Faculty of Arts of Köln. This, however, does not constitute compelling evidence, since it is possible that this commentary was the outcome of Hartlevus' teachings in the 1380s either in Wien, where the 1390 statutes did not actually prescribe the reading of the *Topics*, or in Hiedelberg, both of which were nominalistically oriented Universities. On Hartlevus see: C. Lohr, "Medieval Latin Aristotle Commentaries", in *Traditio* 24 (1968), pp. 149-245. Hartlevus' question-form commentary on the

Hartlevus' commentary exhibited a clear Buridanian exegetical background. This plainly emerged from general clues, such as the terminology used and the basic epistemological framework (i.e. the frequent use of Buridan's differentiation between the *scibilia propinquum*, *remotum* and *remotissimus*). And more specifically, from the views Hartlevus' endorsed on specific issues, like his ideas about dialectic. The preliminary question that Hartlevus approached in his work, namely whether dialectical syllogism was the *subiectum adaequatum* of the *Topics* and of dialectic in general, was ubiquitous to almost all the 15th century commentaries on Aristotle's work. Hartlevus answered that the adequate subject (*subiectum attributionis*) of the *Topics* and, more generally, of dialectic was dialectical argumentation (*argumentatio dialectica*) and not dialectical syllogism alone

Licet omnis sillogismus dialecticus sit argumentum probabile, non tamen e contra omne argumentum probabile est sillogismus dialecticus [...] nam multa sunt argumenta probabilia tenenda per locos dialecticos quae non sunt sillogismus dialecticus.⁵²⁴

7.3.2 Buridan's influence did not last long at Cologne. Here, since the first decades of the 15th century, Realism (or *via antiqua*) had gradually become more important. After the 1425, Realism, in its Thomistic and Albertist variations, prevailed over the other philosophical trends and finally was the only permitted philosophical school, although some documents testify for the existence of the Nominalist school until the 1440s.

One of the main exponent of Cologne Albertism was Heymericus de Campo, who commented on all the books of Aristotle's *Organon* as well as on the *Topics*. In his *Compendium Philosophiae Aristotelis*, having completed the paraphrases of the first chapter of the *Topics*, Heymericus posed some doubts arising from Aristotle's text. The first *dubium* concerned the subject matter of dialectic. In his answer, Heymericus summarized Albert's opinion and stated that dialectic dealt with dialectical or

Topics, see Green-Pedersen, *The Tradition*, p. 397, A.30. I used the ms. Augsburg, Staats-und StadtBibliothek, 4° 68, f.163ra-206vb.

⁵²⁴ A.30, f. 164ra. Even if we read "argumentum", I suspect we should read "argumentatio" instead, since it fits perfectly not only with commonly used terminology, but also with Hartlevus' view.

topical syllogism, which started from probable premises and relied on maximal propositions and common intentions, rather than on appropriate middle terms,⁵²⁵ and that dialectic produced opinion, hence it was also called *sylogismus probativus vel opinionis*.

At the end of the century, Realism was still the dominant philosophical trend at Cologne University. At that time, the Albertist *bursa Laurentii* and the Thomist *bursa Montis* produced their own commentaries on the whole Aristotelian *corpus* of logical writings. Their commentaries on Aristotle's *Topics* displayed similar formal features and exhibited common sets of arguments, even though differently disposed. Despite the well-known disputations and the differences between Cologne Albertists and Thomists about the epistemic status of logic and its subject matter⁵²⁶, the Cologne commentators agreed that dialectical syllogism was the proper subject (the *subiectum attributionis*) of the *Topics* and that dialectic was the sub-part of logic concerned with dialectical syllogism. They acknowledged that dialectic was both *docens*, namely it was the resolute science dealing with dialectical syllogism, and *utens*, in as much as it is used as a tool for other disciplines⁵²⁷. This implied that Cologne realist-oriented commentators interpreted the "syllogizare" of the opening lines of the *Topics* in its technical sense of formally valid deductive argument, which produced opinion starting from its probable premises.

⁵²⁵ Heymericus de Campo, *Compendium Philosophiae Aristotelis*, Basel, Universitätsbibliothek, ms. B, F. VI. 6, ff. 47va-48ra: "Primum <dubium> est de subiecto, titulo, ordine et utilitate huius scientiae [...] Subiectum huius scientiae est syllogismus thopicus sive dyalecticus, qui alio nominetur sillogismus probativus vel opinionis eo quod ex probabilibus concludit opinionem [...] Secundum <dubium> est de hoc quod dicitur 'propositum huius negotii est invenire methadum' an haec scientia sit inventiva [...] Solutio secundi sic, quia docet regulas et principia a quibus cuiuslibet scibilis potest inveniri aliqualis notitia sive fuerit principium sive principiatum vel id* est quando secundum formam suae cognoscentis* contineatur in virtute notificativa maximarum et intencionum communium medii dyalectici eo quod ille intenciones fundantur secundum transcendencia entis analoyci et suorum accidencium, sed scienciam latentem seu sepultam in virtute aliquorum principiorum ad manifestam reducere noticiam est invenire igitur hec scientia dicitur in textu*".

⁵²⁶ Cf. M.J.F.M. Hoenen, "The Reparationes librorum totius naturalis philosophiae (Cologne 1494) as a Source for the Late Medieval Debates between Albertistae and Thomistae", in *Documenti e studi sulla tradizione filosofica medievale* 4 (1993), pp. 307-344; *Id.*, "Late medieval schools of thought in the mirror of university textbooks: the Promptuarium argumentorum (Cologne 1492)", in M.J.F. Hoenen, *Philosophy and Learning*, pp. 329-369, esp. pp. 349-355; Kneepkens, "How to prepare".

⁵²⁷ A.44, fol. Si-ii; A.64, fol. Ai-ii; A.68, fol. i-ii.

7.4 At Leuven University: Teaching the unteachable.

7.4.1 Cologne University highly influenced the newly founded University of Leuven (1425). Indeed, the first generation of Leuven Masters was recruited from Cologne, and Leuven modelled its own rules on the statutes of Cologne. In the earliest Leuven statutes the Nominalist philosophical program was officially interdicted and the reliable authorities who were recommended were exponents of the *via antiqua*, such as Albert the Great and Thomas Aquinas.⁵²⁸

In the middle of the 15th century, Peter de Rivo, one of the most eminent intellectual figures at Leuven University, lectured on Aristotle's *Topics* at the pedagogy, or Arts College, of the Castle. As emerges from a preliminary survey of his work, it seems that Peter obeyed the university statutes, since his commentary did not exhibit any nominalist features and showed a certain acquaintance with Albert the Great's explanation, and with the view of the Albertists. According to Rivo, the *scientia thopica* was the inventive part of logic, it was bipartite into *docens* and *utens* and comprehended sophistry and dialectic. Sophistry was useful for avoiding self-contradiction in disputes, whilst dialectic had an active role in producing probable knowledge about things, "syllogizare de omni problemate".⁵²⁹ Rivo directly addressed the question of whether syllogism or dialectical argumentation was the subject matter of the *Topics* and of dialectic. His answer relied on the different kinds of subjects of logic, which were commonly acknowledged by Albertists.⁵³⁰ The proper subject of the *Topics* and dialectic, Rivo claimed, was the *argumentatio*, whilst the *subiectum dialecticae principaliter intentae* was dialectical syllogism, which was therefore the main or rather the only subject considered by Aristotle in his book and in dialectic.⁵³¹ Interestingly, Rivo endorsed the semantic interpretation of probability, which bears more resemblance with Boethius' of Dacia account than

⁵²⁸ See the article C. Geudens-S. Masolini, "Teaching Aristotle at the Louvain Faculty of Arts, 1425–1500: General Regulations and Handwritten Testimonies", in *Rivista di Filosofia Neo-Scholastica*, 108/4 (2016), pp. 813–844.

⁵²⁹ A.52a, I, ch. 1, G134ra, O322ra-rb.

⁵³⁰ For the differences between the "subiectum attributionis", "communitatis" and "principalitatis" see Kneepkens, "How to prepare", pp. 77–78.

⁵³¹ A.52a, I, ch. 1, G135ra-135va, O324ra-325ra.

with Albert's definition. Although Rivo had an Albertist background,⁵³² he departed from Albert's view that the inference of dialectical syllogisms was secured by the topics:

Contingit enim eandem propositionem esse necessariam et probabilem quia aliquo subiecto ipsius inest aliqua proprietas habilitans ipsum ad praedicatum et sic est probabilis <propositio>. Sed magis intrinsece inspiciendo invenitur causa necessitans ipsum subiectum ad praedicatum quomodo est necessaria <propositio>. Syllogismus ergo assumens talem propositionem ut est necessaria est demonstrativus et assumens eam ut probabilem est dialecticus. Nec syllogismus dicitur dialecticus quia firmatur per locum dialecticum sicut praetendit argumentum.⁵³³

By acknowledging the dialectical syllogism as the subject matter of the *Topics* and by denying an active role to the loci, Rivo limited dialectic exclusively to formally valid deductive arguments based on probable premises.

7.4.2 However, a different picture emerges from some later commentaries on Aristotle's *Topics* resulting from the teaching activity of masters of different pedagogies. This is especially so in the cases of Hugo de Dordraco's 1468-69 lectures at the pedagogy, or College, of Lily, and some fragments of the 1476-77 lecture on the *Topics*, given at the pedagogy of the Pig by either Andreas de Alchmaria or Petrus de Mera or Theodoricus Messaych.⁵³⁴ Despite the fact that nominalist teachings were still officially banished from the Leuven Faculty of Arts, these writings appear to have been permeated with Buridanism. It is difficult to determine if the authors had direct access to the works of Buridan or of any of his followers (such as Marsilius

⁵³² A. 52a, I, ch. 1, G135ra-vb, O325va-vb: "<5> Quod est probabile semper est probabile, sed quod videtur nobis uno tempore non videtur alio tempore, ergo probabilia male notificatur per videri [...] Ad quintum [...] secundo dicitur quod in definitione probabilium 'videntur' non dicit actum sed aptitudinem. Et est sensus 'quae videntur' idest apta sunt videri quia scilicet subiecto probabili inest aliqua proprietas ratione cuius sibi videtur esse attribuendum praedicatum non tamen necessario et evidenter, sed probabiliter, ut matri inest proprietas quaedam non necessitans sed habilitans ipsam ad diligendum filium et ita probabile est quod mater diligit filium licet hoc etiam nulli actu videatur".

⁵³³ A. 52a, I, ch. 1, G136ra, O326ra-rb.

⁵³⁴ I would like to thank Christophe Geudens, for providing me with his transcriptions of the commentaries produced in Leuven in the years 1469 and 1482, and, moreover, for allowing me to make use of them in this article. Mr. Geudens will provide a more detailed analysis of them in his upcoming PhD dissertation.

of Inghen, who commented on Aristotle's *Topics*, or Albert of Saxony); or rather, if they encountered the main tenets of Buridan's philosophy, especially his logic, through intermediary sources, such as the commentaries produced in, and then imported from, Eastern European Universities, such as Prague, Krakow or Erfurt. Hugo de Dordraco's detailed question-based commentary on the *Topics* exhibited a clear Buridanian exegetical and epistemological framework, even though it did not reflect his conception of dialectic's proper subject. According to him, dialectic was the knowledge whose remote subject (*scibile remotum*) was dialectical syllogism. Although he endorsed this view, Hugo regarded as plausible the alternative opinion according to which the subject of dialectic was the *argumentatio dialectica* and its essential constituents (or *partes subiectivae*), were dialectical syllogism and induction. According to Hugo, the tenability of this (anonymous) opinion hinged on the relation of subalternation holding between logic and dialectic and between their respective subject matters. Since logic dealt with argumentation in general, therefore dialectic - which was subalternated to logic and whose proper subject was contained in the proper subject of the subalternating science (logic) - should study dialectical argumentation.⁵³⁵ In his analysis of the epistemological status of dialectic, Hugo did not limit himself to the standard explanation of the ambivalent status of dialectic as *docens* and *resolutiva* on the one hand, and as *utens* and *inventiva* on the other. In fact, his discussion expanded upon the different meanings of *scientia*, upon the criteria governing the hierarchical ordering of disciplines, and upon the differentiation of the objects of knowledge (the *scibilia*). How was it possible for dialectic to have as its *scibile* dialectical syllogism - which was an accidental being, if Aristotle denied the possibility of there being a science of accidental being?⁵³⁶ The question itself was not

⁵³⁵ Hugo de Dordraco, *Quaestiones super libros Topicorum*, Cambrai, Bib. mun., 860, ff. 195r-222v (hereafter named as Hugo, *Quaestiones Topicorum*), fol. 195v: "Quaeritur: Quomodo consideratur hic inductio, utrum principaliter aut minus principaliter. Dicendum quod minus principaliter, quia nec est subiectum, nec pars subiectiva subiecti. Alii tamen imponunt argumentationem dyalecticam esse subiectum istius scientiae. Dicunt inductionem dyalecticam hic considerari principaliter, quia est pars subiectiva argumentationis dyalecticae et istud potest probabiliter dici, quia in principio logice dicitur quia argumentatio secundum se est subiectum totius logice et sic videtur (dicendo* consequenter dictis) esse dicendum quod argumentatio simpliciter dicta est subiectum libri Priorum et argumentatio dyalectica est subiectum istius libri. Nec illi dicunt subiectum istius scientie esse sillogismum dyalecticum, dicunt consequenter dictis; nec ponunt sillogismum subiectum totius logice, sicut aliqui faciunt".

⁵³⁶ Hugo, *Quaestiones Topicorum*, fol. 196r.

new and Hugo's solution was not particularly original. Nevertheless, it was quite interesting since it revealed both the epistemic value assigned by Hugo to dialectic, as well as his acquaintance with nominalist doctrines. Indeed, the author's answer relied on the theory of the threefold objects of knowledge (a theory peculiar to Buridan and Marsilius of Inghen),⁵³⁷ as well as on Buridan's modes and degrees of *perseity*, especially on the differentiation between absolutely *perseity* (*simpliciter*) and *per se* with qualification (*secundum quid*).⁵³⁸ Hugo proposed and rejected two alternatives to solve the problem, which depended on a different understanding of *per accidens*, and consequently on how accident was opposed to *per se*. According to Hugo, it was possible for an accidental being to be the remote object of knowledge (*scibile remotum*), whilst it could not be the proximate or immediate object of knowledge (*scibile propinquum*). The *scibile propinquum*, indeed, was the demonstrated conclusion, and accordingly it was necessary and *per se* absolutely speaking, therefore it could not be an accidental being. On the contrary, the *scibile remotum*, which was the subject of the demonstrated conclusion, i.e., a science's *subiectum attributionis*, had a relative or second mode of necessity and *perseity*. Indeed, it was necessary and *per se* only with qualification (*secundum quid*), namely only by assuming the constancy or existence of the subject (*posita constantia subiecti*, that corresponds to Buridan's *stante significatione*). And this was the case of dialectical syllogism with respect to dialectic.⁵³⁹ Hugo's opinion perfectly suited the notions of subalternating and subalternated disciplines, accepted by the Leuven master. According to this view, a subalternating science/knowledge had neither an

⁵³⁷ Buridan and Marsilius acknowledged three different scibilia, namely the "scibile propinquum", "remotum" and "remotissimum". Hugo, however, speaks only of an immediate object of knowledge, the scibile propinquum which is the conclusion of a demonstration and is necessary and *per se*, and of a remote scibile which is the subject (thus it is a term) of the demonstrated conclusion: "scibile propinquum in qualibet scientia est conclusio demonstrationis et illa debet esse necessaria et per se, sed scibile remotum in qualibet scientia est subiectum conclusionis demonstrationis sive subiectum attributionis quod idem est" (Hugo, *Quaestiones Topicorum*, fol. 196r).

⁵³⁸ See for example Buridanus, *SD*, 8.6.2-3; *Id.*, *Quaestiones in Analytica Posteriora*, I, q. 12; *Id.*, *Quaestiones in Metaphysicam*, VI, q.3.

⁵³⁹ Hugo, *Quaestiones Topicorum*, fol. 196r: "De ente per accidens non potest aliquid per se dici simpliciter tamen bene secundum quid, posita scilicet constantia subiecti. Verbi gratia de homine albo nichil per se potest dici simpliciter, et ergo ista non est necessaria simpliciter: homo albus est albus. Tamen bene potest aliquid dici de homine albo secundum quid per se et necessario et ita ista est necessaria: homo albus est albus secundum quid, posita scilicet constantia subiecti. Unde ista potest esse falsa: homo albus est albus, quia si nullus homo albus sit ipsa est falsa; ipsa tamen est necessaria secundum quid, posito scilicet quod homo albus sit".

accidental *scibile propinquum* nor an accidental *scibile remotum*, and it could be properly qualified as science/knowledge (*vera scientia*), since it met the requirements for science listed by Aristotle in the *Prior Analytics*. And a subalternated science/knowledge, such as dialectic, was considered a science/knowledge only *large* or improperly and could deal with accidental being. Indeed its subject matter was derived from a specification of the subalternating science's subject through an accidental difference.⁵⁴⁰ In Hugo's epistemology, dialectic was considered a science in its own right, even though it did not meet the higher standards of *scientia* required for the few *verae scientiae*. It was sufficient for dialectic to fulfil the less strict scientific criteria required for all the disciplines whose subjects did not have absolute necessity and *perseity*, such as natural or moral philosophy. Thus, on the one hand Hugo's conception of dialectic seemed to signify a development in comparison to the view of his colleague and predecessor Peter de Rivo. On the other hand, however, his idea about the subject matter of dialectic seemed to leave no room for discussing and developing a less strict notion of dialectical argumentation, since induction, similarly to enthymeme, example and dialectical *loci*, were not subjective parts of the subject matter of dialectic and were assigned to unimportant minor roles.

7.4.3 The influence of Buridan appears even more pronounced in a 1477 commentary on the first two books of Aristotle's *Topics*, ascribed to one of the pedagogy of Pig's Professors, either Petrus de Mera or Andreas de Alchmaria or Theodoricus Messaych. Though scholars are unsure which one actually produced the commentary,⁵⁴¹ based on the only surviving folio commenting on the first book, the author seems to have taken aboard Buridan's opinion according to which the subject matter of dialectic was dialectical argumentation, whose four subjective parts were dialectical syllogism, dialectical induction, dialectical enthymeme and dialectical example.⁵⁴² The unknown commentator proposed and decidedly dismissed two

⁵⁴⁰ Hugo, *Quaestiones Topicorum*, fol. 196r-v. It is worth noting that Hugo did not differentiate between subalternation and subordination.

⁵⁴¹ Andreas de Alchmaria, Petrus de Mera, Theodoricus Messaych, Edinburgh, Univ. Lib., Ms. 205 (Laing Ms. 149), ff. 182ra-187rb, book I, ff. 182ra-183ra (hereafter named as A.48). See Green-Pedersen, *The Tradition*, p. 407, A.48.

⁵⁴² A.48, I, f. 182ra: "Utrum notitia octo librorum thopicorum Aristotelis sit scientia [...] Praesens notitia habet omnia requisita ad scientiam, ergo est scientia. Antecedens patet quia habet subiectum,

alternatives. The first was Boethius' view, which conceived of dialectic as dealing with dialectical topics. The second was upheld by Albert the Great and Thomas Aquinas, who were recommended in the University statutes as reliable authorities. However, the anonymous author eschewed the widespread idea that syllogism was the proper subject of dialectic, since it limited dialectical inquiry to syllogism alone and excluded other species of argumentation such as enthymeme and induction. The solution favoured by our Professor was not ascribed to any precise author, but could be easily traced back to Buridan.⁵⁴³ The Leuven Professor reckoned that assigning dialectical argumentation as the proper object of discussion of dialectic would apparently contradict Aristotle's own words at the opening of the *Topics*, which constituted a strong argument in support of the most common view, endorsed too by Albert and Aquinas. However, this apparent inconsistency could be resolved in two ways. Either by reading Aristotle's mention of dialectical syllogism as indirectly including the whole 'argumentatio', of which syllogism constituted but a part. Or by interpreting Aristotle's words as referring to the *subiectum principalitatis* of dialectic, and not to its *subiectum attributionis*.⁵⁴⁴ More interesting is the commentator's answer to another difficulty arising from his view, namely that nowhere in the text did Aristotle explicitly mention dialectical argumentation, which was supposed to be the subject matter of the *Topics* and, more generally, of dialectic. Despite the lack of direct references to it, the commentator suggested that the Stagirite might have implicitly alluded to the *argumentatio dialectica* in the first lines

quod est argumentatio dialectica, principium, quod est procedere ex probabiliibus, passionem, quae est esse generativam opinionis, et partes subiectivas, quae sunt syllogismus dialecticus, inductio dialectica, enthymema dialecticum et exemplum dialecticum; consenquentia tenet quia per Philosophum Primo Posteriorum".

⁵⁴³ A.48, I, f. 182vb: "Quaeritur: quid est subiectum huius scientiae. Pro quo sciendum est quia circa istam materiam sunt tres distinctae opiniones, quarum prima est ipsius Boetii dicentis locum dialecticum esse subiectum [...] Secunda est opinio ipsius Alberti et doctoris sancti puta Thomae, et est quod syllogismus dialecticus est hic subiectum [...] Et confirmat hanc opinionem ex dictis Philosophi in primo istius libri, in quo dicit quod considerandum est quid est syllogismus et quae eius divisio. Licet tamen praesens opinio sit magis usitata et communior, non tamen in se <est> sufficiens; quare ratione huius insufficientiae venit reprobanda. Insufficientiae eius pate<n>t quia sicut possumus arguere dialectice <et> syllogistice, ita etiam enthymatice [sic] et inductive, cum ergo quaedam reperiuntur argumentationes dialecticae et sophisticae sic etiam quaedam reperiuntur argumentationes enthymematicae et inductivae [mss. dialecticae]. Si iam praesens scientia esset de syllogismo dialectico tantum, tales argumentationes non continerentur sub subiecto quae tamen in rei veritate sub ipso dicunt continere [...] Tertia est opinio pro nunc tenenda, quod argumentatio dialectica est hic subiectum"; see Geudens-Masolini, "Teaching Aristotle".

⁵⁴⁴ A.48, f. 182vb.

of his work, when he spoke of the ‘methodum’. In this context the anonymous Leuven commentator offered his unconventional interpretation of method: it signified dialectical argumentation, since through it dialectical arguments could be produced, whether they were syllogisms or other kinds of reasoning.⁵⁴⁵ His originality fully emerged a few lines later, where he openly refused to accept the conventional interpretation of ‘syllogizare’ as connoting syllogism in its technical sense of illative argument, and prefers to interpret ‘syllogizare’ from the viewpoint of the *probatio*: “Dicendum quod syllogizare non capitur proprie in proposito, ut scilicet est actus syllogismi, sed ipsius argumentationis, ut scilicet idem sit quod syllogismus faciens arguere*⁵⁴⁶”. The 1477 commentator legitimated his preference for the view that dialectical argumentation was the subject of dialectic, on the basis of the relation existing between dialectic’s subject matter and the proper subject of the science of the *Prior Analytics*, the *scientia de argumentatione*, and, more generally, on the basis of the relation between these disciplines. But what was the kind of relationships holding between dialectic and the science of the *Prior Analytics*? Was dialectic subalternated or subordinated to it?⁵⁴⁶ The answer to this question might prove useful in determining the level of scientificity of dialectic and its place in the hierarchy of sciences. Unfortunately, the commentator offered an ambivalent explanation which relied on the twofold understanding of ‘argumentatio dialectica’. If taken significatively, then it was an accidental being (insofar as it was compounded); and consequently dialectic was subalternated to the more general science of argumentation. If, however, ‘argumentatio dialectica’ was taken

⁵⁴⁵ A.48, ff. 182vb-183ra: “Arguitur: Aristoteles in praesenti libro nullam facit mentionem de argumentatione dialectica ergo non est ponenda hic subiectum [...] Dicendum quod licet Philosophus non facit aliquam mentionem de ea explicite, bene tamen implicite innuit de ea esse determinandum et hoc in prohemio huius primi intendit ‘Propositum quidem negotii methodum est invenire a qua poterimus syllogizare de omni problemate ex probabilibus’. Si per hoc enim quod dicit ‘methodum’ quamdam innuit argumentationem dialecticam, quia argumentatio dialectica est methodum illa per quam possumus ‘syllogizare’ idest arguere ‘de omni problemate ex probabilibus’ et istud sufficit”.

⁵⁴⁶ Subalternation differs from subordination insofar as the subalternated science’s subject differs from the subalternating science’s subject through an accidental difference. In the case of subordination we have a specification of the subordinated science’s subject through a specific difference, so that the subjects of subordinating and subordinated sciences fall under the same genus. As the anonymous commentator underlines, just as the subject of the subordinating science is not an accidental being, so too subordinated science’s subject cannot be an accidental being, and therefore the subordinated discipline is properly science (“dicitur scientia proprie dicta sicut vult Philosophus Primo Posteriorum”), which is not the case for the subalternated discipline.

circumlocutive, that is, it was considered as a whole, then it was no more an accidental being and as such it fell under the same genus of *argumentatio*. Accordingly, dialectic was subordinated to argumentation's science.

7.4.4 The 1469 and 1477 commentaries disclose an increasing influence of Buridianian doctrines on the Leuven masters, leaving one to suspect a further development in the later commentary of Petrus de Thenis, which culminated with his lectures of the academic year 1481-1482 at the Pedagogy of the Lily - the same Pedagogy as Rivo.⁵⁴⁷ But the analysis of Petrus' work is disappointing, since it marked a shift in the opposite direction: it appears to take a step back from Rivo's Albertism (or, better, Realism), rather than developing a step forward. Peter's explanation at the beginning of the *Topics* did not offer any deep or interesting insight on the matter at hand, rather it merely deployed some of the customary arguments supporting his view that dialectical syllogism was the proper subject (*subiectum attributionis*) of dialectic *proprissima*.⁵⁴⁸

7.5 The University of Cracow: Buridan's heritage in Poland.⁵⁴⁹

7.5.1 In the first half of the 15th century, Buridanism was the main philosophical trend in many universities of Central and Eastern Europe, such as those at Vienna, Leipzig, Erfurt and Cracow. Buridan's ideas spread in the renewed *Studium Generale* of Cracow through the migration of students and masters, especially German, who after the Decree of Kutna Hora (1409) left Prague for Cracow. These scholars brought with them manuscripts containing not only Buridan's works, along with those of

⁵⁴⁷ On the 1481-2 collegedictaten on logic, preserved in the manuscript Cambrai 964 (862), ff. 82r-93v, see Geudens-S. Masolini, "Teaching Aristotle".

⁵⁴⁸ Peter exposed the first two books of the *Topics* and commented in question form on the first book, while questions on the second book are ascribed to Henricus de Gandavo (see Geudens-S. Masolini, "Teaching Aristotle"; see also Green-Pedersen, *The Tradition*, p. 413, A.58): Petrus de Thenis, Saint-Omer, Bibliothèque d'Agglomération, ms. 585, fol. 77r-88v, 263r-279v, here fol. 263r. Further evidence of the distance between Peter and his predecessor who lectured in the 1469 and 1477, is given by Peter's view on the division of sciences, which rests on a realist oriented epistemology, rather than on a Buridianian epistemology which understands science (or knowledge) as the subject's firm assent to a proposition.

⁵⁴⁹ For Cracow Albertism see M. Markowski, "Albert und der Albertismus in Krakau", in Zimmermann, *Albert*, pp. 177-192.

Nicholas Oresme, Albert of Saxony and Marsilius of Inghen, but also commentaries on Aristotle's works produced at the Czech University, which were highly influenced by Buridanism.⁵⁵⁰ As Mieczysław Markowski has shown in his numerous works on the Polish University, during the 15th century different philosophical trends followed one another. At the turn of the century, the Buridan's direct influence was overwhelming, even though it blended with the Prague and Parisian Nominalism of the Buridanian School. Between the 1410s and the 1420s the *via moderna* paved the way for the *via communis*, in which the main nominalistic orientation was enriched by doctrines of the likes of Albert the Great and the Modists Boethius of Dacia and Radulphus Brito. The *via communis* lasted until the mid of the century. The 1460s was a transition period, during which Buridanism's supremacy was rivalled by the *via antiqua*, which made its first appearance at this time. Since the last quarter of the 15th century, Buridanism no longer held its place of prominence, yet without completely fading. Indeed from this period, the *via antiqua* became the prevalent though not exclusive intellectual orientation, and consequently this last phase of Cracow philosophy could be better qualified as eclectic. The works of Albert the Great, Thomas Aquinas and John Versoris received great attention, and subsequently they were flanked by the writings of John Duns Scotus

Significantly, these periods were marked by different approaches to dialectic, and accordingly, by the different roles assigned to demonstrative and dialectical argumentations. Indeed, even though during the entire 15th century professors

⁵⁵⁰ On the 1400 reformation of Cracow *studium generale*, which is considered as a new foundation after the first in the 1364, see A. Goddu, *Copernicus and the Aristotelian Tradition: Education, Reading, and Philosophy in Copernicus' Path to Heliocentrism*, Leiden: Brill, 2010, pp. 14-15 and the bibliographical indications there provided. On students' and professors' migration from Prague after the Decree of Kutna Hora (1409), see: Z. Kaluza, "La crise", esp. pp. 298-308; P. De Vooght, *L'hérésie de Jean Huss*, Louvain: Publications universitaires, 1975, 2 vols, vol. 1, pp. 110-118; F. Smahel, "The Kuettenberg Decree and the Withdrawal of the German Schools from Prague in 1409: a Discussion", in *History of Universities* 4 (1984), pp. 153-166. M. Markowski, "Logik und Semantik im 15. Jahrhundert an der Universität Kraków", in *Medievalia philosophica polonorum* 21 (1975), pp. 73-80; *Id.*, "Formy argumentacji w teoretycznych i praktycznych dyscyplinach filozoficznych na Uniwersytecie Krakowskim w XV wieku" in *Biuletyn Biblioteki Jagiellońskiej* 41 (1991), pp. 27-61; *Id.*, "Dialektische und rhetorische Argumentation an der krakauer Universität im 15. Jahrhundert", in K. Jacobi, *Argumentationstheorie*, pp. 577-587. Unfortunately, I could not consult the important volumes edited by M. Markowski in the *Dzieje filozofii średniowiecznej w Polsce*, namely the volume one (*Logika*, Wrocław: Zakład Narodowy im. Ossolińskich, 1975) and two (*Metodologia Nauk*, Wrocław: Zakład Narodowy im. Ossolińskich, 1976).

commonly admitted four kinds of argumentations, namely syllogism, induction, enthymeme and example during the entire 15th century,⁵⁵¹ the value and importance they bestowed upon them varied throughout the century. During the Buridianian phase and the following predominance of the *via communis*, dialectic and its forms of argumentation gained prominence in the theory and methodology of sciences. Their supremacy originated from the Buridianian epistemological framework. Indeed the commentators from Cracow acknowledged as sciences not only those disciplines satisfying the highest standards of scientificity - the *scientia proprie dicta* - but also those disciplines that met more relaxed scientific requirements - the *scientia communiter dicta*. They accorded the very scientific status and the highest importance to the sciences *communiter dictae*, namely natural and moral philosophy. Since these disciplines dealt with merely accidental items, which happened *communiter* or *ut in pluribus*, they needed forms of argumentation tailored specifically to their contingent objects of knowledge. Therefore, the fourfold types of dialectical argumentations (*probationes*) – such as dialectical syllogism, induction, example and enthymeme – were considered more suitable as heuristic tools than demonstrative syllogism. And dialectic, along with metaphysics, was considered the most important discipline in virtue of its wide-ranging applicability. Dialectic's probable reasoning could serve many other sciences, such as moral and natural philosophy, laws and medicine, metaphysics and theology. The prominent position held by dialectic in the hierarchy of sciences was mirrored in the *curriculum* of studies. In fact, the only logical work lectured on at the M.A. degree level was Aristotle's *Topics*, which was viewed as the book *par excellence* concerned with techniques for producing less rigorous reasoning appropriate to less rigorous sciences. Around the mid 15th century, the University's intellectual frame of reference changed, thus entailing profound epistemological modifications. These modifications had an effect on the acknowledged values and hierarchical ordering of sciences in general, and on the importance of dialectic in particular. Professors no longer accorded the very scientific status to less rigorous disciplines, which, therefore, gradually lost their importance in favour of more

⁵⁵¹ Interestingly, authors, especially the Realists, openly connected these four kinds of argumentations to Aristotle's *Topics*, per es. Piotr Aurifaber: "Notandum secundum Philosophum primo *Topicorum*: quattuor sunt genera argumentorum, scilicet inductio, syllogismus, enthymema et exemplum" (quoted in Markowski, "Formy", p. 42, fn. 106).

certain disciplines, which were sciences *proprie dictae*. Consequently, dialectic started being superseded in its alleged supremacy by the logic of Aristotle's *Analytics*, the so-called sciences *priorica* and *posteriorica*. Proportionately, the dialectical argumentation or *probatio* saw its pre-eminence vanishing, since commentators focused their attention on necessary inferences. Finally, demonstrative or apodictic syllogism replaced the *probatio* as the most accredited heuristic tool: indeed demonstration *facit scire*, whereas dialectical reasoning produces mere opinion.⁵⁵² According to Markowski, this new intellectual climate could explain the absence of commentaries from Cracow on Aristotle's *Topics* in the last quarter of the 15th century.⁵⁵³ Once Realism became the dominant intellectual trend, professors commented on all the books of Aristotle's *Organon* except the *Topics*.

If, at a theoretical level, dialectic and its various forms of argumentation received more or less attention, at a practical level it seems that the role of the *dialectica utens* did not undergo significant changes throughout the different intellectual phases of Cracow University. Indeed during the entire 15th century Aristotle's *Topics* served to prepare the students at Cracow for participation in academic disputes, providing them with practical argumentative strategies to be used in such contexts.

7.5.2 In the first half of the 15th century, professors at Cracow produced sets of questions on the eight books of the *Topics*, which exhibited the peculiar intellectual trend at Cracow called *via communis*. Despite this, however, in these question-commentaries Buridanism stood out as the main exegetical background and provided the general philosophical framework. The *Quaestiones Cracovienses*⁵⁵⁴

⁵⁵² On the basis of Markowski's *Logika*, Goddu does well to highlight the effect of these intellectual shifts on the theory of argumentation: "In the early period up to 1460 Cracow masters characterizes logic as a practical, rather than speculative, science that achieved primarily probable conclusions [...] masters devoted more time to dialectic than to demonstration [...] The former [*scil.* before the 1449 reform at the Faculty of Arts] preference for dialectical argumentation gave way gradually to certain, necessary inferences, at first in the re-emergence of syllogistic demonstration and then around the 1469 in the development of the logic of consequences"; after the 1475 reform Cracow Universities characterized for an eclectic philosophical trend: "there was no violent anti-dialectical reaction but greater emphasis on the logic of consequences and demonstrative syllogism. Despite this shift, however, masters continued to quote the definitions and views of their nominalist predecessors" (Goddu, *Copernicus*, pp. 72-74).

⁵⁵³ Markowski, "Formy", p. 33.

⁵⁵⁴ The so-called *Questiones pragensium* (hereafter abbreviated as A.43) survive in a single copy so far identified, the ms. 684 of the Jagellonian Library in Cracow. It is a "reportatio lectionum in Universitate Pragensi confectus", dating to the first half of the 15th century; see M. Markowski- S. Wlodej, *Repertorium commentariorum medii aevi in Aristotelem Latinorum quae in Bibliotheca Jagellonica*

heavily relied on and borrowed from commentaries imported from Prague to Cracow. A comparison between the *Quaestiones Cracovienses* and the cognate so-called *Quaestiones Pragenses* shows their close affinity. Which is not a circumscriber to their general organization, namely the kinds of questions asked and the arguments proposed therein, but extends to the authorities named, such as Buridan and Marsilius of Inghen, Boethius of Dacia and Radulphus Brito, Albert the Great, Richard Billingham and the master Rupertus.⁵⁵⁵ However, the masters at Cracow elaborated upon the Prague questions, by adding their own comments and remarks. The opening questions of the redaction of the *Quaestiones Cracovienses* analysed presently, concerned the standard issues about the epistemological status, unity, and subject matter of dialectic, more precisely of the *dyalectica docens*.⁵⁵⁶ On the basis of the fourfold meaning of science proposed by Buridan, but slightly modified, the anonymous Cracow commentator affirmed that dialectic was a science. Precisely, it was a science *communiter dicta*, namely it was a steadfast assent to a necessary demonstrable proposition.⁵⁵⁷ Relying on the opening lines of Aristotle's work, the

Cracoviae asservantur, Ossolineum, 1974, pp. 35-36; Green-Pedersen, *The Tradition*, pp. 404-405, A.43. The so-called *Quaestiones Cracovienses* or *Puncta Thoporum* are preserved in four manuscripts of the Jagellonian Library, whose contents present variations:

- 1) ms. 1903, dating to the 1460: "Expliciunt Puncta Thoporum reportata per P. de C. in Bursa Philosophorum sub a.D. M°CCCC sexagesimo" (see Markowski-Wlodej, *Repertorium*, pp. 78-89);
- 2) ms. 2006, written in 1448, f. 1v: "Liber magistri Stanislai de Brzeziny scriptus per eundem, *alia manu*: datus Librarie Artistarum, f. lir: Johannes de Ostresowo(?), ... Dominicus de Legnicz, Johannes Wonycz [...] Explicit: Et per magistrum Jacobum de Gay empta aput maystrum Stanislaum de Brzeziny protunc rectorem scole ad s. Stephanum in Cracovia pro 1 marca cum sex grossi, 1448" (see Markowski-Wlodej, *Repertorium*, p. 87);
- 3) ms. 2008, written in 1460, f. 1r: "Mathie liber ad magistrum Kazuchowsky" (see Markowski-Wlodej, *Repertorium*, pp. 88-89);
- 4) ms. 2094, dating around the 1450; I will refer to this manuscript in the following pages, containing the "Disputata Thoporum librarie universitatis", hereafter abbreviated as A.36 (see Markowski-Wlodej, *Repertorium*, p. 108).

On the so-called *Quaestiones Cracovienses* see also M. Markowski, *Burydanizm w polsce w okresie przedkopernikanskim. Studium z Historii filozofii I nauk scislych na uniwersytecie krakowskim w XV wieku*, Wroclaw-Warszawa -Krakow, 1971, pp. 317-321; Green-Pedersen, *The Tradition*, pp. 401-402, A.36.

⁵⁵⁵ Master Rupertus should be Robertus Anglicus (A.10), see for example the quotation at A.36, f. 12rb, which coincides with A.10, f. 184rb.

⁵⁵⁶ A.36, I, qq. 1-4; q. 1, f. 1ra: "Per dyalecticam intelligitur hic habitus scientificus docentem ex quibus et qualibus debet fieri argumentatio dyalectica" and f. 2ra: "Tertio modo dyalectica capitur pro habitu scientifico docente ex quibus et qualibus debent fieri argumentationes dyalecticae et talis dyalectica est scientia sic capitur in proposito. Et ergo quod dicitur quod dyalectica generat opinionem, ibi intelligitur quod Philosophus capit dyalectica primo modo [*scil.* pro argumentatione procedente ex probabilibus] non autem tertio modo". Cf. with A.43, I, qq. 1-5, ff. 2ra-5vb.

⁵⁵⁷ A.36, I, q. 1, f. 1ra: "Secundum Buridanum scientia capitur quatuor modis [...] Tertio modo scientia capitur ut est assensus firmus alicuius veri necessarij demonstrabilis notitia non curando an speculativa vel practica. Etiam non curando an sit de causis secundis vel primis. Isto modo principia

commentator affirmed that dialectic was concerned with the same object as the *Topics*, namely the ‘argumentatio dyalectica’, and that its task was to ‘facere argumenta dyalectica.’⁵⁵⁸ Examined from the twofold perspective of its subject matter (*ratione obiecti*) and its purpose (*ex parte finis*), dialectic could be considered in two different ways. From the viewpoint of its subject of study (*ratione obiecti*), there were two main opinions on the *subiectum attributionis* of dialectic. The first view was held by Radulphus Brito, according to which the subject matter (*subiectum attributionis*) of dialectic was dialectical syllogism, and this view rested on the literal interpretation of the opening lines of the *Topics*. The second view, according to which dialectic dealt with dialectical argumentation, was held by Buridan, Marsilius of Inghen and the “*via communis*”.⁵⁵⁹ The anonymous commentator endorsed this latter view too. For him dialectic was the discipline whose most remote proper subject matter (*scibile remotissimum*) was dialectical argumentation and what related to it, such as dialectical predicates or topics

non sciuntur quia sunt indemonstrabilia et sic scientia non distinguitur contra artem nec contra alios habitus intellectuales. Quarto modo scientia capitur ut est assensus firmus alicuius veri necessarij speculativi demonstrabilis notitia. Isto modo scientia distinguitur contra alios habitus intellectuales. Modo tunc responditur ad secundum suppositum quod dyalectica est scientia capiendō scientiam tertio modo et non quarto modo”. The reference is to Buridan’s *SD*, 8.4.3.

⁵⁵⁸ A.36, I, q. 3, f. 4rb: “Scientia dyalectica differt* ab alijs tribus [*scil.* priorica, posteriorica et elencica] tam penes obiecta quam penes fines. Primo penes obiecta quia istae scientiae quatuor habunt diversa obiecta, quia obiectum dyalecticae sive libri thopicorum est argumentatio dyalectica, ut sic [...] Secundo modo differt penes fines eo quod finis dyalecticae est posse arguere de omni problemate vel alio modo posse ponere conclusionem sine omni repugnantia. Et hoc videtur textus dicere in puncto: ‘Nihil dicemus repugnans’. Vel tertio modo quod finis dyalecticae est facere argumenta dyalectica. Sed finis posterioricae scientiae est facere argumentationem demonstrativam procedentem ex necessarijs; sed elencicae <est facere> argumentationem sophisticam procedentem ex aparentibus; sed prioricae finis est facere argumentationem in communi quoad illationem”. In that same question, we find addressed the further question of whether dialectic differed from logic - understood as the *scientia priorica* of the *Prior Analytics* dealing with the *illatio* - and whether dialectic is subordinated or subalternated to logic. The anonymous commentator answers that the *priorica* and dialectic are parts of the whole ‘logic’ (“Non differunt sicut partes a suo toto, ut dictum est, sed sicut partes eiusdem totius, eo quod scientia priorica et dyalectica sunt partes totius logicae”) and that dialectic subalternates *accidentaliter* to the *priorica*, since its subject matter, the dialectical argumentation, is accidentally subalternated to the *argumentatio in communi*.

⁵⁵⁹ A.36, I, q. 4, f. 5ra-rb: “Utrum argumentatio dyalectica sit subiectum praesentis scientiae. Responditur quod sic. Pro quaestio nota: de subiecto praesentis scientiae sunt duae opiniones. Una Britonis, quae dicit quod syllogismus dyalecticus sit subiectum [*scil.* A.20, I, q. 6, f. 13ra], sicut patebit in prima ratione. Alia est opinio Marsili et Biridani, qui dicunt quod argumentatio dyalectica est hic subiectum, eo quod Philosophus hic non determinat solum de syllogismo dyalectico, sed etiam de qualibet specie argumentationis, sicut de argumentatione entimematica et exempli”. Strikingly, Albert the Great was not listed along with Brito as upholder of the view according to which dialectical syllogism was the subject matter of the *Topics* and of dialectic.

Est scientia considerans de argumentatione dyalectica practice ^{tamquam} de scibili remotissimo principaliter in speciali vel de aliquo per se pertinente ad ipsam prout huiusmodi; dicitur prima *practice* ad excludendum ipsam metaphysicam, quia licet considerat de argumentatione dyalectica, tamen hoc est speculative; dicitur *de scibili remotissimo* propter grammaticam, quia licet considerat de argumentatione dyalectica practice quia de conclusionibus quae possunt esse conclusiones dyalecticae tamen hoc est ut scibile propinquum, sed non remotissimum. Dicitur *principaliter in speciali* propter logicam totam quia licet considerat de argumentatione dyalectica, tamen hic est in communi et non specialiter.⁵⁶⁰

Against this opinion could be put forward Brito's textual argument – namely, Aristotle's words at the beginning of the *Topics* –, which, however, the anonymous commentator did not deem to be compelling. Indeed, dialectical syllogism could be a subject of dialectic, but it could not be its proper subject, since dialectical forms of reasoning exceeded the mere syllogistic form: dialectica syllogism was just a species within the wider genus of the dialectical argumentation. Moreover, at the beginning of the *Topics* Aristotle might have meant to signify the genus 'argumentatio dialectica' by naming one of its species, namely dialectical syllogism

Brito dicit quod syllogismus dyalecticus esset subiectum et hoc probavit per textum [*scil. Top. 1.1 100a 19-24*], modo igitur dicitur quod syllogismus dyalecticus est subiectum praesentis scientiae, sed tamen non est adaequatum subiectum praesentis scientiae, eo quod non omnia considerata habent attributionem ad hoc subiectum. Modo non est inconueniens eiusdem scientiae esse plura subiecta, quorum unum est adaequatum et alterum non, sed ad probationem*: ibi dicunt quia quod Philosophus ponit speciem pro genere, syllogismum dyalecticum pro argumentatione dyalectica. Vel aliter: textus non dicit 'hunc enim solum quaerimus', sed dicit 'hunc enim quaerimus' ita quod

⁵⁶⁰ A.36, I, q. 2, fol. 4ra. The anonymous commentator accepted what he presented as the standard definition of dialectic *ratione obiecti* ("Dyalectica est scientia considerans de argumentacione dyalectica vel de aliquo per se pertinente ad ipsam prout huiusmodi").

textus vult quod in ista scientia quaerimus syllogismum dyalecticum, sed tamen non solum dyalecticum sed etiam alias argumentationes.⁵⁶¹

In this discussion about the object of the study of dialectic, an important element deserved to be emphasized. The view endorsed by the Cracow commentator about probative argumentations represent a development of the Boethian *argumentum*, of the dialectical form assigned to dialectical syllogisms by Parisian ‘pluralists’ and of Buridan’s *probatio*. The anonymous Cracow master claimed that the essential feature of the *argumentatio* was its being probative:

Argumentatio diffinitur sic: ‘Argumentatio est argumenti per orationem explicatio’, ut dicit Petrus Hispanus. Et propria passio istius subiecti est esse probativum instrumentaliter suae partis scilicet conclusionis sive consequentis. Et ibi ‘probativum’ capitur prout differt contra demonstrativum: et additur ‘instrumentaliter’ propter intellectum, eo quod intellectus probat conclusionem principaliter. Sed argumentatio dyalectica sic diffinitur: argumentatio composita ex antecedente probabili et consequente.⁵⁶²

However, this explanation of the notion *argumentatio* differed from Buridan’s. The Picardian master had differentiates between the *illatio* and the *probatio*. The species of *probatio* were the *demonstratio* and dialectical argumentation. By contrast, the anonymous commentator seemed to implicitly understand this definition of *argumentatio* as concerning dialectical or probable argumentation alone, and to disassociate the *demonstratio* from the *probatio*. Consequently, the *demonstratio* not only did not belong to the domain of the *probatio*, but also appeared opposed to it. After all, the *probatio* generated *opinio*, while the *demonstratio* produced *scientia* - as

⁵⁶¹ A.36, I, q. 4, fol. 5va; cf. A.43, I, q. 5, f. 6ra: “Nota: Brito et *antiqui* ponunt ly syllogismus dyalecticus pro subiecto, sed Buridanus ly argumentatio dyalectica et Marsilius et postius* secundum communem viam ponitur argumentatio dyalectica quam syllogismus dyalecticus. Et Brito allegat textum ad hoc in principio [*scil. Top. 1.1 100a 19-24*] et communiter exponentes dicunt quod syllogismus dyalecticus quaeritur tamquam causa materialis vel subiectum. Sed potest dicere ad textum quod est subiectum praesentis scientiae, sed non adaequatum quia non solum determinatur de syllogismo dyalectico, sed de omni argumentationi dyalectica, sicut sive sit exempla sive enthymema. Etiam: textus non dicit ‘hunc solum quaerimus’ sed dicit ‘hunc quaerimus’”.

⁵⁶² A.36, I, q. 4, f. 5rb.

was made explicit in the *Quaestiones Pragenses*.⁵⁶³ This passage seemed to imply that the domain of the *probatio* was coextensive with that of dialectic and, accordingly, that the term *probativus* properly attached to dialectical or probable argumentations alone. In his discussion of the differences between dialectic and sophistry, the anonymous commentator qualified the probativeness of an argumentation in terms of a (positive) refutation procedure. An *argumentatio probabilis* which aimed at proving the contradictory of the proposition upheld by the respondent.⁵⁶⁴ This claim was perfectly consistent with the main purpose of dialectic. Indeed from the vantage point of its scope (*ex parte finis/penes finem*) dialectic was defined as the discipline teaching how to produce or refute a dialectical proof. The anonymous commentator found textual support for this affirmation in the opening lines of the *Topics* as well as in the second chapter of the first book, in which Aristotle had presented the three utilities of dialectic, namely “ad exercitationem, ad obviaciones, ad secundum philosophiam disciplinas”. The anonymous commentator’s explanation of dialectic’s usefulness for training people reflected the general attitude of the Cracow professors towards dialectic as *utens* and the role they accorded to it:

Ipsa Philosophus in principio textus ponit primam utilitatem istius sciencie [scil. *Top.* I, 2, 101a27 ‘ad exercitationem’] et est ista: quod ipsa dyalectica docet persuadere de omni problemate tam in iure quam in medicinis, eo quod ipsa dyalectica potest formare suas premissas et conclusiones ex omnibus terminis. Et licet Buridanus in principio *Physicorum* in conclusione tertia et quarta dicat quod sola methaphysica potest formare conclusionem ex omnibus terminibus,

⁵⁶³ A.43, I, q.5, f. 6ra: “Contra: omne subiectum debet esse dissimile, sed argumentatio non est dissimilis, ergo. Bene responditur* quia si diffinitur, tunc sic: ‘argumentatio est argumenti per orationem explicatio’ et illud* concordat* cum* argumentationi et non argumento; sed argumentum est ‘ratio rei dubiae faciens fidem’. [add. in marg. Aliqui dicunt quod propria passio argumentationis est illatio probativa consequentis existente*]. Et passio propria dyalecticae est esse probativum instrumentaliter sui partis, scilicet conclusionis; et ‘probativum’ debet sumi ut differt contra demonstrativum, scilicet ut generat opinio quia demonstratio generat scientiam”.

⁵⁶⁴ A.36, I, q. 3, f. 5ra: “Scientia dyalectica considerat de argumentatione probabili et quaelibet talis est elencicus; arguitur: argumentatio probabilis est argumentum probantem conclusiones oppositae ipsius respondentis, igitur sequitur quod est elencus [...] Nota: scientia dicitur esse elencica dupliciter: uno modo quia considerat de elenco positive. Isto modo dyalectica est elencica ut argumentum probat. Alio modo quia est de elenco privative. Isto modo dyalectica non est elencica”; cf. A.43, I, q. 4, f. 5rb-va.

tamen dyalectica etiam potest, sed diversimode, quia methapysica demonstrative, sed ipsa dyalectica probabiliter, sic quod docet invenire medium ad unumquodque problema.⁵⁶⁵

Along with Buridan, this commentator acknowledged that dialectic should produce not only opinion, but also persuasion. Dialectic provided the dialectician with argumentative patterns for addressing problems arising in all sciences: the dialectic method could be applied to many disciplines having different degrees of certainty. The problem, then, was to harmonize this applicability of dialectical reasoning, which produced mere opinion, with the claim that sciences, whether *communiter* or *proprie dictae*, did not proceed dialectically, but only through the scientific process of demonstration required for scientific knowledge. The anonymous commentator solved the doubt by affirming that a science could legitimately use a scientific as well as probative method: the scientific value of the dialectical method was thus recognized. The demonstrative procedure was required in order to obtain certain knowledge; whilst dialectical argumentation was more apt at producing non-necessary conclusions and a less rigorous knowledge:

Processus est duplex: qui scientificus solum sit, et in tali processu semper proceditur demonstrative eo quod scientia est habitus communis per demonstrationem acquisitus. Alius est probativus, et in tali aliquis procedit dyalectice. Et isto modo Philosophus multotiens in libris suis probat conclusionem, prima per argumenta dyalectica et postea demonstrative. Et ergo dicitur quod nulla scientia procedit dyalectice, verum est processu scientifico sed non processu probativo. Sed quod dicitur in scientia est sic procedendum sicut scientia generatur hoc est processu scientifico.⁵⁶⁶

⁵⁶⁵ A.36, I, q. 5, f. 5vb. This passage has no parallels in the A.43.

⁵⁶⁶ A.36, I, q. 1, f. 3va: "dicitur duplex scientia de* quo* unius generis scibilis. Uno modo secundum considerationem: isto modo dyalectica est unius generis scibilis eo quod est unius subiecti et non plurium non convertibilium. Secundo modo hoc ad applicationem: isto modo dyalectica non est unius generis scibilis et Philosophus addit 'determinati generis scibilis' et sic ipse talem vult quod dyalectica non est applicabilis solum ad unam scientiam, sed ad plures. [...] Processus est duplex: qui scientificus solum sit, et in tali processu semper proceditur demonstrative eo quod scientia est habitus communis per demonstrationem acquisitus. Alius est probativus, et in tali aliquis procedit dyalectice et isto modo Philosophus multotiens in libris suis probat conclusionem prima per argumenta dyalectica et postea demonstrative. Et ergo dicitur quod nulla scientia procedit dyalectice, verum est

In the first half of the 15th century, Cracow University represented one strand of the Buridanian heritage, perhaps the most fruitful strand, even more than Prague, through which the Polish University received it. The Cracow professors seemed to have taken seriously the role that Aristotle assigned to dialectic. At Cracow, indeed, this discipline was used for the “intellectual training” of students, in order to make them able “to easily argue about the subject proposed”. Dialectic was also advantageous for “the philosophical sciences”, especially for the sciences *communiter dictae*, for which the probative process was thought to be more suitable than the demonstrative method. It is not a mere coincidence, then, that ethics and natural philosophy flourished in Cracow at the same time that dialectic reached its peak, during the first half of the 15th century.

Moreover, dialectic was also valuable for “casual encounters”, so that students, after having taken into account “the opinions held by most people”, could disagree with or give their assent to such arguments “on the ground not of other people’s convictions but of their own, shifting the ground of any argument”⁵⁶⁷ that appeared to be improbable. Aristotle’s words call to mind the words, written by an eminent student of Cracow University. In the prefatory epistle of his *De Revolutionibus Orbium Caelestium*, Copernicus defended his intrepid hypothesis on the basis of the uncertainty of and contention about the thesis commonly advocated by philosophers and astronomers:

Those who know that the consensus of many centuries has sanctioned the conception that the earth remains at rest in the middle of the heaven as its center would, I reflected, regard it as an insane pronouncement if I made the opposite assertion that the earth moves. Therefore I debated with myself for a long time whether to publish the volume which I wrote to prove the earth’s motion [...] I was impelled to consider a different system of deducing the motions of the universe’s spheres for no other reason than the realization that astronomers do not agree among themselves in their investigations of this subject [...] For a long

processu scientifico sed non processu probativo. Sed quod dicitur in scientia est sic procedendum sicut scientia generatur hoc est processu scientifico”.

⁵⁶⁷ Aristotle, *Topics*, I. 2, 101a25-37, p. 168.

time, then, I reflected on this confusion in the astronomical traditions concerning the derivation of the motions of the universe's spheres. I began to be annoyed that the movements of the world machine, created for our sake by the best and most systematic Artisan of all, were not understood with greater certainty by the philosophers, who otherwise examined so precisely the most insignificant trifles of this world. For this reason I undertook the task of rereading the works of all the philosophers which I could obtain to learn whether anyone had ever proposed other motions of the universe's spheres than those expounded by the teachers of astronomy in the schools. And in fact first I found in Cicero that Hicetas supposed the earth to move. Later I also discovered in Plutarch that certain others were of this opinion [...] Therefore, having obtained the opportunity from these sources, I too began to consider the mobility of the earth. And even though the idea seemed absurd, nevertheless I knew that others before me had been granted the freedom to imagine any circles whatever for the purpose of explaining the heavenly phenomena. Hence I thought that I too would be readily permitted to ascertain whether explanations sounder [*firmiores demonstrationes*] than those of my predecessors could be found for the revolution of the celestial spheres on the assumption of some motion of the earth.⁵⁶⁸

Conclusion

In the 15th century universities in which the *via antiqua* provided the intellectual setting for masters and scholars, commentators on Aristotle's *Topics* considered dialectic as that part of logic concerned with dialectical syllogism. And they assigned a place of prominence to syllogism, if not the only place, among the different forms of reasoning, such as enthymeme and induction. Thus, their inquiries do not exceed the domain of formal logic. The only exception we encountered was the anonymous

⁵⁶⁸ N. Copernicus, *On the Revolutions*, book 1, Engl. tr. by E. Rosen, Baltimore and London: The John Hopkins University Press, 1992, pp. 4-5. On Copernicus' education at Cracow University and his connection with topical strategies, see Goddu, *Copernicus*.

1477 Leuven commentator, who committed himself to Buridan's opinions, despite the official interdiction on Buridan's writings.

The 15th century Parisian commentaries on Aristotle's *Topics* written by professors of different philosophical orientations did not disclose any doctrinal tendency. The Parisian masters had an aseptic approach to the *Topics* that eventuated in tired and lethargic commentaries in which a given amount of knowledge was transmitted without noteworthy innovation nor compelling insights in dialectic and its subject matter. When one examines the folia of these commentaries, one gets the impression that the arguments were crystallized as time progressed. So that eventually they became neutral, and detached from the original intellectual setting in which they had been elaborated on. Indeed, despite the commentators' inclinations toward Albertism, Thomism, Scotism or Nominalism, their writings on the *Topics* exhibited a common Realist orientation and a standard argumentative line. Realism, and mainly that of Albert the Great, was the only actor on the Parisian scene, Buridan and his followers were completely absent.

Merely flipping through commentaries on the *Topics* produced at Cologne in the 15th century, confirms the impression that no significant insights could be found therein and that no notable scholarly developments on dialectic or the *Topics* occurred during the century, for commentators teaching at the end of the century rested on the standard opinions of their predecessors.

The works produced at Leuven in the second half of the 15th century testify to the relevance of the philosophical orientation of the commentators in elaborating upon more or less interesting speculations about dialectic. The commentaries of Petrus de Rivo's and Petrus de Thenis' offered pat answers to trite questions which were widespread among realist authors. Whilst the works influenced by Buridanism, such as that of Hugo's, and the 1477 *Questions*, developed long and interesting reflections on dialectic, which often also mentioned the alternative opinions, along with the arguments sustaining them, and why these interpretations should be rejected. Particularly interesting were the 1477 *Questions*. Its anonymous author claimed that dialectic was concerned with dialectical argumentation,

whether syllogism or a different kind of reasoning. Accordingly, he emphasized the epistemological import of dialectical argumentations.

Moving toward Eastern Europe, and Cracow in particular, the importance of the commentators' philosophical orientation emerges even more clearly. In the first half of the 15th century, Cracow offers an example, perhaps the best, of the impact of Buridanism both on the interpretation of Aristotle's *Topics*, and more generally, on the role and value assigned to dialectic, both as *docens* and *usive*, and to its argumentative strategies. It is not a mere coincidence that during the decades in which Buridanism and the *via communis* marked the intellectual setting of the Cracow Universities, dialectic flourished therein and gained a place of prominence among the philosophical disciplines. The Cracow commentators focused their theoretical analysis on the *probatio* rather than on the *illatio*. They did not speculate on the logical properties of necessary inferences, such as apodictic syllogisms or consequences. Rather they expanded upon less rigorous kinds of argumentation, namely induction, enthymeme and example - on their epistemological value and their applicability to the *scientia communiter dicta*. The Cracow commentators seemed to have exclusively associated the notion of *probatio* with the dialectical method, thus departing from Buridan. The Picardian master indeed had a wider understanding of *probatio*, which also included the scientific or demonstrative process. Whereas the Cracow commentators sided with Buridan in acknowledging that the scope of dialectic was not limited to the production of a less certain and rigorous kind of knowledge (*opinio*): dialectic should also produce persuasion.

CONCLUSION

Having walked along the path of dialectic under the guide of Aristotle's *Topics*, we would surely do well to look back and weave together all the various threads we have encountered along the way. This will help us ascertain whether the method I have adopted herein has offered a positive addition to Green-Pedersen's reconstruction.

In these chapters I have analysed several commentaries on the *Topics* from various epochs and places. I have focused our attention on the possible influences of the different views about logic and logical doctrines on the different approaches to the *Topics* that these commentators employed. The main outcome of this scrutiny is the identification of two different and autonomous exegetical traditions, namely British, and continental or Parisian.

The few extant British commentaries on the *Topics*, dating from the mid to the turn of the 13th century, reflect the influence of the main trend in British logic at that time, namely terminism. The commentaries of Pseudo-Bonaventure (A.4), John Duns Scotus and Walter Burley, are characterized by the contextual approach, the constant presence of sophisms, and the adoption of the doctrine of the *appellatio/suppositio* in the treatment of the *loci*. Moreover, the analysis of the *loci* was even more conducted through the rules of consequences. In this scenario, the Boethian tradition of the topics, which was still lightly present in Pseudo-Bonaventure's work, could not find any room for application, and was destined to make way for the doctrine of consequences.

All these typical traits considered together, are not found in commentaries written in Paris during the 13th-15th century. The continental tradition is marked out by different varying features, which often mirrored major doctrinal changes, e.g. the substitution of a paradigm of logic with another. On the basis of the commentaries analysed, which however do not cover all the extant continental writings on the

Topics, it has been possible to identify four main stages in the Parisian reception of Aristotle's *Topics*.

In the earlier phase (1230/40ca.-1270ca.), during which terminism was the main trend and logic was considered a *scientia sermocinalis*, the opinions of commentators were polarized. On the one hand are advocates of the plurality of syllogistic forms – such as Robert (7), Robertus Anglicus (10), Adenulphus de Anagni (A.11) and Albert the Great (A.2). The doctrine of the double form could be considered as an attempt by these authors, especially Robert (A.7), to reconcile the new Aristotelian tradition of the topics with the Boethian one, in which the topics served as inference licenses for enthymemes. The role of warrants of the topics, however, was hardly tenable in the Aristotelian syllogistic *topica*. In authors such as Robert (A.7) and Albert the Great the distinction between logical and dialectical forms and matters was carried to the extreme. By discriminating between logical and dialectical forms, these commentators also discriminated between the logical and the dialectical validity of reasoning. And, more generally, between the formal and the epistemological understanding of logic and dialectic: logic studied the rules for drawing necessary inferences, whilst dialectic was committed to producing beliefs about the conclusion. On the other hand, we can group together masters who are placed in the Aristotelian tradition of the *Topics* exclusively, such as Robertus de Cilnacobi (A.1), Elias (A.14) and the anonymous A.9. They did not admit any formal differentiation between syllogisms, and accordingly, they could hardly assign any active role to the topics in dialectical reasoning.

The beginning of the second phase (1270ca.-1300/10ca.) coincided with the spread of both the Avicennian 'intentionalistic logic', which viewed logic as a *scientia rationalis*, and Aquinas' paradigm that subdivided logic according to the three acts of reason. It was in this intellectual milieu that there developed modistic logic, or better semantic, which introduced a novel approach to the *Topics*. Boethius of Dacia, Simon of Faversham and Radulphus Brito departed from the literal exegeses of their predecessors. They took the *Topics* as the starting point for any inquiry about general questions which were not always related to Aristotle's words. In modistic discussions, the topics remained in the background.

The third phase (mid-14th century) was predominated by the figure of John Buridan, whose ideas were later upheld by Marsile of Inghen and Hartlevus de Marka. In his *Quaestiones Topicorum*, the Picardian master placed himself out of the tradition of his 13th century predecessors, by denying that the object of study of dialectic and the *Topics* was dialectical syllogism, and by affirming that it was dialectical argumentation instead. Dialectical argumentation was a type of *probatio*, which in its turn was the epistemological facet of the *argumentum/argumentatio* – the other being the logical face or *illatio*. In his understanding of the *probatio*, Buridan explicitly connected himself to the Boethian notion of *argumentum/argumentatio*, since the *probatio* aimed at producing a more or less certain belief in the cognitive agent, just as the Boethian argument did. This view, along with the assumption of dialectical argumentation as the subject-matter of dialectic, allowed Buridan to subsume some types of arguments which had been relegated to a minor role, such as induction, enthymeme and example, under the sphere of dialectically valid reasoning.

The last phase extended throughout the entire 15th century. Parisian commentaries on Aristotle's *Topics* from this period did not disclose their authors' doctrinal tendency, but merely showed a common Realist orientation and argumentative line.

The story of the *Topics* in 15th century, however, did not end in Paris. By considering the historical and institutional contexts of the various European Universities, which often determined the Universities' intellectual setting, I have attempted to show that the commentary tradition of the *Topics* during the 15th century is not such "a sad story",⁵⁶⁹ after all. The most interesting reflections we have met along the way were developed by authors influenced by Buridan or Buridanism, such as the 'outlawful' Leuven commentator (A.48), the Prague masters and their colleagues in Cracow.

But having come all this way, we can, in closing, wonder whether the question, raised by Jennifer Ashworth concerning the impact of humanistic dialectic on the development of informal argumentation in the 16th century,⁵⁷⁰ could be

⁵⁶⁹ Green-Pedersen, *The Tradition*, p. 328; accepted by Ebbesen, "The Theory", p. 29.

⁵⁷⁰ "How far logic was rhetoricized, and how far humanist dialectic, or any other type of sixteenth-century logic, was concerned with probabilistic and informal argumentation", where 'informal' are the arguments "acceptable but not deductively valid [...]" To conclude, if we mean by the rhetoricizing

reformulated and posed to our *Topics*' commentators. How far and how seriously were the commentators of the *Topics* concerned with probabilistic and informal argumentation that nowadays pertains to philosophical logic? Did any of these commentators develop interesting reflections on dialectic? In other words, did these authors conceive of dialectic "as a sub-part of logic which studies dialectical syllogisms as presented in Aristotle's *Topics*"⁵⁷¹ or, rather, did they think of dialectic as possibly dealing with a wider subject than dialectical syllogism alone, such as dialectical argumentation and, accordingly, non-deductively valid forms of reasoning?

My research has highlighted the presence of the Boethian tradition of the topics alongside its Aristotelian counterpart. The presence of the Boethian topics was attested to by the demarcation between the logical and epistemological facets of reasoning. This demarcation was expressed through the distinction proposed by Parisian 'pluralists' between inferring and proving syllogisms, or through the Buridanian separation between the *illatio* and the *probatio*. Both the Parisian 'pluralists' and Buridan and his followers described the probative side of reasoning in connection to the Boethian definition of argument. Thus, they characterized the proving *argumentum* in terms of cognitive psychology. The proving argument did not consist in the mere correct application of logical rules of inference, which yielded a necessary conclusion, but it was a reasoning that engendered a belief in the subject.

of logic that material from rhetoricians came to be included in logic texts, this is certainly the case. How far the material absorbed included informal persuasive devices is another matter", in E. J. Ashworth, "*Developments in the Fifteenth and Sixteenth Centuries*", in *Handbook of the History of Logic, ii: Medieval and Renaissance Logic*, ed. by D. M. Gabbay – J. Woods, Amsterdam: Elsevier, 2008, p. 609-644, here p. 632 and p. 639.

⁵⁷¹ *Ibid.*, pp. 633-635: "If we now ask what counts as dialectic and whether it differs from logic, two main answers are possible. One can regard 'logic' and 'dialectic' as merely two names for one discipline, or one can regard dialectic as a sub-part of logic which studies dialectical syllogisms as presented in Aristotle's *Topics* [...] A third answer, based on the discussion of dialectical invention by Rudolph Agricola, is that dialectic focusses not on the dialectical syllogism, but on Topical discourse and debate, and hence, according to Jardine and others, is a part of logic primarily concerned with persuasive techniques and informal argumentation, that is, with non-deductive strategies [...] More usually, however, if an argument was labelled as 'probable' this had to do, not with the replacement of a strict logical relation between premises and conclusion by some other relation, but with the epistemological status of the premises [...] This reading is, of course, based on the belief that Aristotle's reference to 'syllogism' in the *Topics* is to be taken as a reference to a particular kind of formally-valid deductive structure [...] On this interpretation, dialectic is clearly a sub-part of logic, or, for those who preferred the term 'dialectic' to the term 'logic', dialectic in the narrow sense is a part of dialectic in the broad sense".

And the topic, especially the *locus maxima propositio*, was the warrant for the transfer of belief from the premises, which were more known and believed than the doubted conclusion, to the conclusion itself. Thus, in commentaries written by Parisian 'pluralists', Buridan and his followers, the dialectical reasoning was not limited to the dialectical syllogism, which differed from the other types of syllogisms only in virtue of the epistemic state of its premises. For these authors influenced by Boethius, the dialectical reasoning was a topical reasoning, which differed from the formal reasoning since it started from different points, applied diverse rules, and produced different results. This 'epistemological' understanding of the dialectical reasoning allowed commentators to enlarge the spectrum of dialectical reasoning and to expand upon less rigorous kinds of argumentations, namely induction, enthymeme and example.

Upon inquiring into the Medieval commentaries on Aristotle's *Topics*, we can surely conclude that for various commenators dialectic, dialectical reasoning and topical argument often represented the epistemological aspect of medieval logic which lived side by side with the formal aspect.

APPENDIX

This appendix lists the commentators of Aristotle's *Topics* mentioned in the various chapters. Along with the author's name – when available – I added the reference number of Green-Pedersen's catalogue of Commentaries on Aristotle's *Topics*⁵⁷² and commentators' views on the subject matter of dialectic.

13TH CENTURY.

AUTHOR	ORIGIN, DATE	SUBJECT OF THE <i>TOPICS</i>
A.1, Robertus de Cilnac(h)obi (Kilwardby (?))	Paris, 1240s	Dialectical syllogism
A.2, Albertus Magnus	Würzburg, 1264-7	Dialectical syllogism
A.4, Anonymous (Pseudo-Bonaventure)	British, mid-century	Dialectical syllogism
A.7, Robert	Paris, 1230s-40s	Dialectical syllogism
A.9, Anonymous	Paris, 1250s	Dialectical syllogism
A.10, Robertus Anglicus	Paris	Dialectical syllogism
A.11, Adenulphus de Anagnia	Paris, 1260s	Dialectical syllogism
A.13, Boethius de Dacia	Paris, 1270s	Dialectical syllogism
A.14, Elias	Paris, 1270s	Dialectical syllogism
A.17, Angelus de Camerino	Paris, 1290s	Dialectical syllogism
A.18, Simon de Faversham	Paris, 1280s	Dialectical syllogism
A.20, Radulphus Brito	Paris, 1290s-1300	Dialectical syllogism
Iohannes Duns Scotus	Oxford, 1290s	Dialectical syllogism

14TH CENTURY.

AUTHOR	ORIGIN	SUBJECT OF THE <i>TOPICS</i> AND OF DIALECTIC
A.21, Iohannes Buridanus	Paris, 2 nd quarter 14 th ce.	Dialectical argumentation
A.29, Gualterus Burlaeus	British, 1300-7	Dialectical syllogism
A.33, Marsilius de Inghen	Paris, 3 rd quarter 14 th ce.	Dialectical argumentation
A.30, Hartlevus de Marca	Cologne (?), 1380s	Dialectical argumentation

⁵⁷² See Green-Pedersen, *The Tradition*, pp. 382-417.

15TH CENTURY.

AUTHOR	ORIGIN	SUBJECT OF THE <i>TOPICS</i> AND OF DIALECTIC
A.35, Iohannes Versoris	Paris, 1430s-40s	Dialectical syllogism
A.36, Anonymous	Cracow, 1440s-60s	Dialectical argumentation
A.37, Petrus Richeri	Paris, 1442	Dialectical syllogism
A.38, Iohannes Sucket	Paris, 1429	Dialectical syllogism
A.42, Heymericus de Campo	Cologne, 1420s-30s	Dialectical syllogism
A.43, Anonymous	Prague, end 14 th -1 st quarter 15 th ce.	Dialectical argumentation
A.44, Arnoldus de Tongern	Cologne, 1490s	Dialectical syllogism
A.45, Anonymous	Mainz, 1460s-80s	Dialectical syllogism
A.47, Ra(n)dulphus Boissel (or Boyssel)	Paris, 1454	Dialectical syllogism
A.48 and A.53, Petrus de Mera or Andreas de Alchmaria or Theodoricus Messaych	Leuven, 1476-77	Dialectical argumentation
A.50, Hugo de Dordraco	Leuven, 1468-69	Dialectical syllogism
A.52, Iohannes Hannon (or Iohannes Magistri)	Paris, 1470s	Dialectical syllogism
A.52a, Petrus de Rivo	Leuven, 1450s	Dialectical syllogism
A.55, Christianus Foliot	Paris, 1474	Dialectical syllogism
A.56, Georgius Bruxellensis & Thomas Bricot	Paris, 1490s	Dialectical syllogism
A.57, Petrus Tartaretus	Paris, 1490s	Dialectical syllogism
A.58 e A.60, Petrus de Thenis	Leuven, 1481-82	Dialectical syllogism
A.64, Gerardus Henrici de Harderwijk	Cologne, 1494	Dialectical syllogism

Bibliography

Authors before 1500

- Adenulphus de Anagni, *Notulae Topicorum*, Cesena, Biblioteca Malatestiana, Plut. D. XXVI.3, ff. 43ra-106vb.
- Alanus de Insulis, *Anticlaudianus*, in A. di Lilla, *Viaggio della saggezza. Anticlaudianus. Discorso sulla sfera*, ed. C. Chiurco, Milano: Bompiani, 2004.
- Albertus Magnus, *Analytica posteriora*, in *Id.*, *Opera Omnia*, ed. A. Borgnet, vol. 2, Paris: Vivès, 1890, pp. 1-232.
- *De sophisticis elenchis*, in *Id.*, *Opera Omnia*, ed. A. Borgnet, vol. 2, Paris: Vivès, 1890, pp. 525-713.
- *Super Porphyrium de V Universalibus*, in *Opera Omnia. Editio Coloniensis*, ed. M. Santos Moya, vol. I/1a, Münster: Aschendorff, 2004.
- *Topica*, in *Id.*, *Opera Omnia*, ed. A. Borgnet, vol. 2, Paris: Vivès, 1890, pp. 233-524.
- Andreas de Alchmaria, Petrus de Mera, Theodoricus Messaych (A.48), *Circa initia*, Edinburgh, University Library, Ms. 205 (Laing Ms. 149), ff. 182ra-187rb
- Angelus de Camerino, *Sententia totius Libri Topicorum*, Biblioteca Apostolica Vaticana, Pal. Lat. 1057, ff. 1ra-198vb.
- Anicius Manlius Severinus Boethius, *De Topicis Differentiis*, in *Patrologia Latina*, vol. 64, 1174-1216, (Engl. tr. in E. Stump, *Boethius' De topicis differentiis*, Ithaca and London: Cornell University Press, 1978).
- *In Isagogen Porphyrii commentorum editio secunda*, ed. S. Brand, in *Anicii Manlii Severini Boethii operum pars I: in Isagogen Porphyrii commenta*, ed. G. Schepps-S. Brandt, Vindobonae-Lipsiae: F. Tempsky - G. Freitag, 1906.
- *In Topica Ciceronis Commentaria*, in *M. Tullii Ciceronis opera quae supersunt omnia ac deperditorum fragmenta*, ed. J. K. von Orelli-J. G. Baiter, Zürich: Orelli et Füsslini, 1833, vol. 5 (Engl. tr. in E. Stump, *Boethius' In Ciceronis Topica*, Ithaca-London: Cornell University Press, 1988).
- Anonymous, *Circa primum Topicorum*, Frankfurt am Main, Universitätsbibliothek Johann Christian Senckenberg, ms. Praed 47, ff. 144ra-162ra; (*Circa initium primi libri Topicorum*) Frankfurt am Main, Universitätsbibliothek Johann Christian Senckenberg, ms. Praed. 63, ff. 372ra-414va.
- Anonymous, *Quaestiones Cracovienses or Puncta Thopicorum*, Cracow, Jagellonian Library, ms. 2094, ff. 1ra-110vb.
- Anonymous, *Questiones pragenesium*, Cracow, Jagellonian Library, ms. 684, ff. 2ra-82va.
- Anonymous [Ps. Bonaventure], Roma, Collegio San Isidoro, ms. 1/10, ff. 80ra-100vb.

- Aristoteles, *Analytica Priora. Translatio Boethii, Recensio Florentina*, ed. L. Minio-Paluello, Bruges-Paris: Desclée de Brouwer, 1962 (*Aristoteles Latinus* = AL, III 1-4).
- De sophisticis elenchis. Translatio Boethii, Fragmenta Translationis Iacobi et Recensio Guillelmi de Moerbeke*, ed. B. G. Dod, Leiden-Bruxelles: E. J. Brill-Desclée De Brouwer, 1975 (*Aristoteles Latinus* = AL, VI 1-3).
- *Topica. Translatio Boethii, Fragmentum Recensionis Alterius et Translatio Anonyma*, ed. L. Minio-Paluello adiuv. B. G. Dod, Bruges-Paris: Desclée De Brouwer, 1969 (AL, V 1-3).
- *Les Topiques, livres I-IV*, ed. by J. Brunschwig, Paris: Les Belles Lettres, 1967 - 2007.
- *The Complete Works of Aristotle: The revised Oxford translation*, ed. J. Barnes, Princeton: Princeton University Press, 1984.
- *Topics Books I & VIII. With excerpts from related texts*, ed. by R. Smith, Oxford: Oxford University Press, 1997
- Arnoldus de Tongern, *Reparationes libri Thopicorum Arestotelis*, in *Id., Epitomata sive reparationes logicae veteris et novae Aristotelis iuxta viam et expositionem [...] Alberti doctori Magni [...] ad utilitatem et uberiores profectum scolarium ac artium Baccalauriorum bursam Laurentii vulgo appellatam*, Coloniae 1496.
- Augustinus Niphus, *Stagirita Topiconum Libri Octo, cum Augustini Niphi medices suessani philosophi clarissimis commentariis*, Venetiis: apud Hieronymum Scotum, 1569.
- Aurelius Augustinus, *De Ordine*, ed. W. M. Green, (CCSL, 29), Turnhout: Brepols, 1970.
- Basilus Caesariensis, *Homelie* = Saint Basil, *Exegetic Homilies*, engl. tr. A. C. Way, Wahington, DC: Catholic University of America Press, 1963.
- Boetius de Dacia, *Quaestiones super librum Topiconum*, in *Id., Opera. Topica-Opuscula*, ed. N. G. Green-Pedersen-J. Pinborg, København: G. E. C. Gad, 1976, vol. VI/I.
- Cassiodori Senatoris *Institutiones*, ed. R. A. B. Mynors, Oxford: Clarendon Press, 1937 (Engl. tr. by J. W. Halporn, *Institutions of Divine and Secular Learning and On the Soul*, Liverpool: Liverpool University Press, 2004).
- Cicero, *Topica*, in *Id., De inventione, De optimo genere oratorum, Topica*, engl. tr. H. M. Hubbell (Cicero in twenty-eight volumes, vol. II), London-Cambridge (Mass.): William Heinemann-Harvard University Press, 1976.
- *Brutus, Orator*, engl. tr. G. L. Hendrickson-H. M. Hubbell (Cicero in twenty-eight volumes, vol. V), London-Cambridge (Mass.): William Heinemann-Harvard University Press, 1971

- Convenevole da Prato, *Regia Carmina dedicati a Roberto d' Angiò re di Sicilia e di Gerusalemme*, Introduzione, testo critico, traduzione e commento di Cesare Grassi, Saggi di Marco Ciatti e Aldo Petri, Prato: Gruppo bibliofili pratesi, 1982.
- Dante Alighieri, *Convivio*, ed. G. Fioravanti, in Dante Alighieri, *Opere*, Milano: Mondadori, 2014, vol. 2.
- Diogenes Laertius, *Lives of Philosophers*, eng. tr. R. D. Hicks, Cambridge (Mass.): Harvard University Press, 1925, 2 vols.
- Dominicus Gundissalinus, *De divisione Philosophiae*, ed. Baur, Münster: Aschendorff, 1903.
- Garlandus Compotista, *Dialectica*, ed. by L. M. de Rijk, Assen: Van Gorcum, 1959.
- Georgius Bruxellensis, *Logica magistri Georgii insert textu Bricoti*, Paris 1493. (A.56)
- Gerardus Henrici de Harderwijk, *Commentaria in octo libros Topicorum* in *Id., Commentaria in quattuor libros nove logice secundum processum burse laurentiane Coloniensis ubi doctrine Alberti magni peripateticorum veracissimi interpretis sectatores propagatoresque fidelissimi*, Coloniae 1493.
- Giraldus Odonis OFM, *Opera philosophica*, vol. II: *De intentionibus. Critical edition with a study on the medieval intentionality debate up to ca. 1350*, ed. L. M. de Rijk, Leiden: Brill, 2005.
- Gualterus Burlaeus, *De Consequentibus*, ed. N. J. Green-Pedersen, "Walter Burley's *De Consequentibus*. An Edition," in *Franciscan Studies* 40, (1980,) pp. 102-166.
- *Expositio super librum Porphyrii*, transcr. by M. Vittorini, available on line: http://www-static.cc.univaq.it/diri/lettere/docenti/conti/Allegati/WB_praedicabilia.pdf
 - *On the Purity of the Art of Logic. The Longer Treatise*, in, *Id., On the Purity of the Art of Logic. The Shorter and the Longer Treatises*, trans. by P. V. Spade, Yale University Press: New Haven, 2000.
 - *Notulae*, mss. Città del Vaticano, Vat. Lat. 2146, ff. 113ra-204va; Cesena, Biblioteca Malatestiana, S. X. 2, ff. 118ra-248va; Oxford, Merton College, ms. 296, ff. 1ra-92va.
 - *Tractatus super Praedicamentorum*, ed. A. Conti, available on line at: http://wwwstatic.cc.univaq.it/diri/lettere/docenti/conti/Allegati/WB_praedicamenta.pdf.
- Guilelmus de Shyreswood, *Introductiones in logicam*, in C. H. Lohr-P. Kunze-B. Mussler (eds.), "William of Sherwood, 'Introductiones in Logicam' critical text", in *Traditio*, 39 (1983), pp. 219-299.
- Hartlevus de Marka, *Quaestiones librorum Topicorum*, Augsburg, Staats-und StadtBibliothek, ms. 4° 68, f.163ra-206vb.

- Herrad of Hohenbourg, *Hortus deliciarum*, ed. R. Green–M. Evans–C. Bischoff–M. Curschmann (eds.), London–Leiden: The Warburg Institute/University of London–Brill, 1979.
- Heymericus de Campo, *Compendium Philosophiae Aristotelis*, Basel, Universitätsbibliothek, ms. B, F. VI. 6, ff. 1ra-90va.
- Hugo de Dordraco, *Quaestiones super libros Topicorum*, Cambrai, Bibliothèque municipale, ms. 860, ff. 195r-222v.
- Hugo de Sancto Victore, *Didascalicon*, = *The Didascalicon of Hugh of St. Victor. A medieval guide to the Arts*, ed. J. Taylor, New York–London: Columbia University Press, 1961.
- Iamblichus Chalcidensis, *The Letters*, ed. J. M. Dillon–W. Polleichtner, Atlanta: Society of Biblical Literature, 2009.
- Iōannou Tou Stobaiou *Eklogai apophthegmatōn kai ypothēkōn* / Ioannis Stobaei *Sententiae ex thesauris Graecorum delectae, quarum autores circiter ducentos & quinquaginta citat / et in sermones sive locos communes digestae, a Conrado Gesnero Doctore Medico Tigurino in latinum sermonem traductae, sic ut latina graecis e regione respondeant*, ed. by Conrad Gessner, Basileae: ex officina Ioannis Oporini, 1549.
- Ioannes Suckert, *Quaestiones Topicorum*, Augsburg, Staats- und Stadtbibliothek, 2° Cod. 342b, ff. 128ra-143va.
- Isidorus Hispalensis, *Etymologiarum sive Originum libri XX*, Oxford: Clarendon, 1966 (Engl. tr. in *Id., The Etymologies of Isidore of Seville*, ed. S. A. Barney–W. J. Lewis–J. A. Beach–O. Berghof, Cambridge–New York–Melbourne–Madrid–Cape Town–Singapore–São Paulo: Cambridge University Press, 2006).
- Johannes Buridanus, *Quaestiones in Rhetoricam*, ed. E. B. Preben-Hansen, accessed April 28, 2016, <http://www.preben.nl/BuridanRH.pdf>.
- *Quaestiones Topicorum*, ed. N. J. Green-Pedersen, Turnhout: Brepols, 2008.
- *Summulae de Dialectica*, eng. tr. G. Klima, New Haven: Yale University Press, 2001).
- *Summulae de locis dialecticis*, ed. N. J. Green-Pedersen, Turnhout: Brepols, 2013.
- Johannes Duns Scotus, *Notabilia Scoti in Libros Topicorum*, Città del Vaticano, Biblioteca Apostolica Vaticana, Vat. Ott. 318, ff. 247ra-296vb.
- Johannes Saresberiensis, *Metalogicon*, ed. by J. B. Hall–K. S. B. Keats-Rohan, Turnhout: Brepols, 1991 (Engl. tr. by D. D. McGarry, *The Metalogicon of John of Salisbury: a twelfth-century defense of the verbal and logical arts of the trivium*, Berkeley: University of California Press, 1955).
- Johannes Versoris, *Quaestiones super libros Topicorum*, in *Id., Super omnes libros nove logice*, Köln 1494 (Repr. Frankfurt am Main: Minerva, 1967).
- Lambertus de Auxerre, *Logica (Summa Lamberti)*, ed. F. Alessio, Firenze: La Nuova Italia Editrice, 1971 (Engl. tr. in *Lambert of Auxerre, Logica, or Summa*

Lamberti, ed. T. S. Maloney, Notre Dame: University of Notre Dame Press, 2015).

Lambertus de Monte Domini, *Copulata pulcherrima in novam logicam Aristotelis [...] secundum viam preclarissimi philosophi ac fundatissimi logici sancti Thome Aquinatis quorum frequens exercitium est apud magistros in florentissimo studio Coloniensi bursam montis regentes*, Coloniae 1493.

Marius Victorinus, *Ars grammatica*, ed. I. Mariotti, Firenze: Le Monnier, 1967.

Marsilius de Inghen, *Abbreuiatio libri Topicorum*, Wolfenbüttel, Herzog August Bibliothek 3161 (18.31, Aug. 4°), f. 187va–190vb.

Martianus Capella, *De Nuptiis Philologiae et Mercurii*, ed. J. Willis, Leipzig: Teubner Verlagsgesellschaft, 1983 (Eng. tr. *The Marriage of Philology and Mercury*, ed. W. H. Stahl–R. Johnson–E. L. Burge, in *Martianus Capella, Martianus Capella and the Seven Liberal Arts*, Columbia University Press, New York: 1977, vol. 2).

Nicolaus Copernicus, *On the Revolutions*, eng. tr. E. Rosen, Baltimore and London: The John Hopkins University Press, 1992.

Petrus Abaelardus, *Dialectica*, ed. L. M. De Rijk, Assen: Van Gorcum 1970².

— *De interpretatione*, ed. K. Jacobi–C. Strub, (CCCM, 206), Turnhout: Brepols, 2010.

— *Glossae Super Topica in Pietro Abelardo, Scritti di logica*, ed. M. Dal Pra, Firenze: La nuova Italia, 1969².

— *Logica 'Nostrorum petitioni sociorum'*, ed. B. Geyer in *Beiträge zur Geschichte der Philosophie und Theologie des Mittelalters* 21 (4), Munster: Aschendorff, Munster: Aschendorff, 1933.

— *Isagoge*, ed. B. Geyer, in *Beiträge zur Geschichte der Philosophie und Theologie des Mittelalters* 21 (1), Munster: Aschendorff, 1919.

— *Categories*, ed. B. Geyer, in *Beiträge zur Geschichte der Philosophie und Theologie des Mittelalters* 21 (2), Munster: Aschendorff, Munster: Aschendorff, 1921.

Petrus Hispanus, *Tractatus, called afterwards Summulae Logicales*, ed. L. M. De Rijk, Assen: Van Gorcum, 1972.

Petrus de Rivo, *Lectura super libros Topicorum I-II*, G= Greifswald, Bibliothek des Geistlichen Ministeriums, 34. D. IX, ff. 134ra–148rb; O= Berlin, Staatsbibliothek, Ms. Magdeburg 227, ff. 322ra–362rb.

Petrus Richeri, *Quaestiones super libros Topicorum*, Oxford, Bodleian Library, ms. Canon. Misc. 486, fol. 116ra–144vb.

Petrus de Thenis, *Lectura Topicorum* Saint-Omer, Bibliothèque d'Agglomération, ms. 585, fol. 77r–88v, 263r–279v.

Porphyry, *Isagogen*, engl tr. by J. Barnes, Oxford: Clarendon Press, 2006.

Radulphus Brito, *Quaestiones super Porphyrium*, q. 3, in S. Ebbesen–J. Pinborg, "Bartholomew of Bruges and his Sophisma on the Nature of Logic" in *Cahiers de l'Institut du Moyen-Âge Grec et Latin*, 39 (1981), pp. III–80.

- *Quaestiones supra Thopica Aristotelis*, Paris, Bibliothèque Nationale de France, ms. Lat. 11132, ff. 1ra-52ra.
- Ra(n)dulphus Boissel (Boyssel), *Qaestiones Topicorum*, Firenze, Biblioteca Nazionale Centrale, Conv. Soppr. E. 6. 997, fol. 179ra-208va.
- Remigii Autissiodorensis *Commentum in Martianum Capellam. Libri I-II*, ed. C. E. Lutz, Leiden: E.J. Brill, 1962.
- Robert, *Notitae supra librum Topicorum Aristotelis*, Lisboa, Biblioteca Nacional de Portugal, Fundo Alcobaça 175 (378), ff. 1ra-113ra.
- Robertus Anglicus, *Scriptum super libro Topicorum*, Oxford, Bodleian Library, ms. Canon. 403, ff. 182ra-221rb.
- Robertus de Cilnacobi, *Supra librum Topicorum Aristotelis*, Firenze, Biblioteca Nazionale Centrale, Conv. Soppr. B.4.1618, ff. 95ra-151rb.
- Robertus Grosseteste, *Commentarius in Posteriorum Analyticorum libros*, ed. P. B. Rossi, Firenze: L. Olschki editore, 1981.
- Robertus Kilwardby, *De ortu scientiarum*, ed. A. G. Judy, Toronto: PIMS, 1976 (Engl. tr. in N. Kretzmann-E. Stump, *The Cambridge Translations of Medieval Philosophical Texts*, Cambridge (Mass.): Cambridge University Press, 1988).
- *Notulae Libri Posteriorum*, in D. Cannone, *Le 'Notule libri Posteriorum' di Robert Kilwardby nella tradizione esegetica latina medievale del XIII secolo*, Ph.D. diss. University of Cassino–University “La Sapienza” of Rome, 2003–2004.
- Simon de Faverisham, *Dicta super librum Topicorum*, Leipzig, Universitätsbibliothek, ms. 1368, ff. 24ra-43ra.
- *Quaestiones veteres et novae super libro Elenchorum*, ed. S. Ebbesen–T. Izbicki–J. Longeway–F. Del Punta–E. Serene–E. Stump, Toronto: Pontifical Institute of Mediaeval Studies, 1984.
- Thomas Aquinas, *Expositio libri Posteriorum. Editio altera retractata*, ed. R.-A. Gauthier, in *Sancti Thomae de Aquino Opera Omnia iussu Leonis XIII p.m. edita*, Romae–Paris: Commissio Leonina–Vrin, 1989.
- *Expositio super librum Boethii de Trinitate*, ed. B. Decker, Leiden: Brill, 1959.

Authors after 1500

Abbagnano, N., "Quattro concetti di dialettica", in *Rivista di Filosofia*, 49/2 (1958), pp. 123–133, repr. in *Studi sulla dialettica*, Torino: Taylor, 1969.

Albertus Magnus und sein System der Wissenschaften. Schlüsseltexte in Übersetzung Lateinisch-Deutsch, ed. by Albertus Magnus-Institut, Münster: Aschendorff Verlag, 2011.

Andrews, R., "The *Notabilia Scoti in Libros Topicorum*: An Assessment of Authenticity," in *Franciscan Studies*, 56 (1998), pp. 65–75.

Arcoleo, S., "Filosofia ed arti nell' *Anticlaudianus* di Alano di Lilla", in J. Koch (ed.), *Arts libéraux et philosophie au moyen-âge. Actes du quatrième congrès international de philosophie médiévale*, Institut d'Études Médiévales–Vrin: Montréal–Paris, 1969, pp. 569–574.

Ashworth, E. J., "Traditional Logic", in C. B. Schmitt–Q. Skinner–E. Kessler (ed.), *The Cambridge History of Renaissance Philosophy*, Cambridge: Cambridge University Press, 1988, pp. 143–172.

— "Le syllogisme topique au XVI^e siècle: Nifo, Melanchthon et Fonseca", in Biard–Mariani-Zini, *Les Lieux*, pp. 408–430.

— "Developments in the Fifteenth and Sixteenth Centuries", in *Handbook of the History of Logic, ii: Medieval and Renaissance Logic*, ed. by D. M. Gabbay – J. Woods, Amsterdam: Elsevier, 2008, p. 609–644,

Aspects de la dialectique, Paris: Desclée de Brouwer, 1956.

Aurigemma, L., *Il segno dello scorpione nelle tradizioni occidentali dall'antichità greco-latina al Rinascimento*, Giulio Einaudi editore: Torino, 1976.

Barnes, J., "Logical matter and logical form", in A. Alberti (ed.), *Logica, mente e persona*, Firenze: Olschki, 1990, pp. 7–119.

— "Philosophy and Dialectic", in J. Barnes–M. Bonelli (ed.), *Method and Metaphysics: Essays in Ancient Philosophy*, Oxford: Oxford University Press, 2011, vol. 1, pp. 164–173.

Bazàn, B. C.– Wippel, J. F.– Fransen, G.–Jacquart, D. (eds.), *Les questions disputées et les questions quodlibétiques dans les facultés de théologie, de droit et de médecine*, Brepols: Turnhout, 1985.

Biard, J., "Science et rhétorique dans les Quaestiones sur la Rhétorique de Jean Buridan", in G. Dahan–I. Rosier-Catach (eds.), *La Rhétorique d'Aristote, traditions et commentaires de l'Antiquité au XVII^e siècle*, Paris: Vrin, 1998, pp. 135–152.

— "Le lieu de la croyance : le traité sur les Topiques de Jean Buridan", in Biard–Mariani-Zini, *Les Lieux*, pp. 359–383.

— *Science et nature. La théorie buridanienne du savoir*, Paris: Librairie Philosophique J. Vrin, 2012.

- Biard, J.-Mariani Zini (eds.), F., *Les lieux de l'argumentation. Histoire du syllogisme topique d'Aristote à Leibniz*, Turnhout: Brepols, 2009.
- Black, D. L., *Logic and Aristotle's Rhetoric and Poetics in Medieval Arabic Philosophy*, Leiden: Brill, 1990.
- Bolton, R., "Definition and Scientific Method in Aristotle's *Posterior Analytics*", in A. Gotthelf-J. Lennox (eds.), *Philosophical Issues in Aristotle's Biology*, Cambridge: Cambridge University Press, 1987, pp. 120-166.
- "The epistemological basis of Aristotelian dialectic", in D. Devereux-P. Pellegrin (eds.), *Biologie, logique et métaphysique chez Aristote: actes du séminaire C.N.R.S.-N.S.F., Oléron 28 juin-3 juillet 1987*, Paris: Editions du CNRS, 1990, pp. 186-236.
- Brumberg-Chaumont, J. (ed.), *Ad notitiam ignoti: l'Organon dans la translation studiorum à l'époque d'Albert le Grand*, Turnhout: Brepols, 2013.
- "Les divisions de la logique selon Albert le Grand", in Brumberg-Chaumont (ed.), *Ad notitiam ignoti*, pp. 336-416.
- Brunschwig, J., "Dialectique et ontologie chez Aristote", in *Revue Philosophique* 89 (1964), pp. 179-200.
- "Dialectique et philosophie chez Aristote à nouveau", in N. L. Cordero (ed.), *Ontologie e dialogue. Mélanges en hommage à Pierre Aubenque*, Paris: Vrin, 2000, pp. 1-12.
- Byrne, E., *Probability and Opinion. A Study in the Medieval Presuppositions of Post-Medieval Theories of Probability*, The Hague: Nijhoff, 1968.
- Catto, J. I.-Evans, R. (eds.), *The history of the university of Oxford. Volume II: Late Medieval Oxford*, New York: The Clarendon Press, 1992.
- Cesalli, L., "What is medieval logic after all? Towards a scientific use of natural language", in *Bulletin de Philosophie Médiévale*, 52 (2010), pp. 49-53.
- "Postscript. Medieval Logic as Sprachphilosophie", in *Bulletin de Philosophie Médiévale*, 52 (2010), pp. 117-132.
- "Logique et Topique chez Gauthier Burley", in Biard-Mariani-Zini, *Les lieux*, pp. 293-333.
- Chadwick, H., *Boethius: the consolations of music, logic, theology, and philosophy*, Oxford: Clarendon, 1990.
- Chauvin, E., *Lexicon rationale sive thesaurus philosophicus ordine alphabetico digestus, in quo vocabula omnia philosophica, variasque illorum acceptiones, juxta cum veterum, tum recentiorum placita, explicare & universe quae lumine naturali sciri possunt, non tam concludere, quam recludere conatur*, Rotterodami: apud Petrum vander Slaart, 1692.
- Cobban, A. B., *The Medieval Universities. Their Development and Organization*, London: Methuen, 1975.
- Collingwood, R. G., *An Autobiography*, Oxford: Clarendon Press, 2002.

- Cooper, J., "Aristotle on the Authority of 'Appearances'", in *Id., Reason and Emotion: Essays on Ancient Moral Psychology and Ethical Theory*, Princeton: Princeton University Press, 1999, pp. 281–291.
- Courtenay, W. J., "The registers of the University of Paris and the Statutes against the Scientia Occamica", in *Vivarium*, 31/4 (1991), pp. 13–49.
- "Radulphus Brito, master of arts and theology," in *Cahiers de l'Institut du Moyen-Âge Grec et Latin*, 76 (2005), pp. 131–158.
- Croce, B., *Saggio sullo Hegel*, Bari: Laterza, 1913.
- D'ancona, P., "Le rappresentazioni allegoriche delle arti liberali nel medio evo e nel Rinascimento", *L'arte*, 5 (1902), pp. 137–155, 211–228, 269–289, 370–385.
- Dal Pra, M., *Storia della filosofia e della storiografia filosofica. Scritti scelti*, ed. by M. A. Del Torre, Milano: Franco Angeli, 1996.
- de Libera, A., "Le traité *De Appellatione* de Lambert de Lagny (Lambert d'Auxerre)", in *Archives d'Histoire Doctrinale et Littéraire du Moyen Âge*, 48 (1981), pp. 227–285.
- "Les Summulae dialectices de Roger Bacon I-II. De Terminis. De Enuntiatione", in *Archives d'histoire doctrinale et littéraire du moyen âge*, 53 (1986), pp. 139–289.
- "Référence et quantification: Sur la théorie de la distribution au XIII^e siècle," in A. de Libera – A. Elamrani-Jamal – A. Galonnier (eds.), *Langages et philosophie: Hommage à Jean Jolivet*, Paris: Librairie Philosophique J. Vrin, 1997.
- Deman, T., "Probabilis", in *Revue des sciences philosophiques et théologiques*, 22 (1933), pp. 260–90.
- Denifle, H.–Chatelain, A., *Chartularium Universitatis Parisiensis*, Paris, 1889–97.
- De Pater, W. A., *Les Topiques d'Aristote et la dialectique platonicienne. La méthodologie de la définition*, Fribourg: St. Paul, 1965.
- de Rijk, L. M., *Logica Modernorum. A contribution to the History of Early Terminist Logic*, Assen: Van Gorcum, 1962–1967.
- Deuffic, J.-L., "Un logicien renommé, proviseur de Sorbonne au XIV^e s. Raoul le Breton de Ploudiry. Notes bio-biographiques," in *Pecia: ressources en médiévistique*, 1 (2002), pp. 45–154.
- De Vooght, P., *L'hérésie de Jean Huss*, Louvain: Publications universitaires, 1975.
- Dod, B., "Aristoteles Latinus", in N. Kretzmann–A. Kenny–J. Pinborg–E. Stump (ed.), *The Cambridge History of Later Medieval Philosophy*, Cambridge: Cambridge University Press, 1988, pp. 45–79.
- D'Onofrio, G., «Fons scientiae». *La dialettica nell'Occidente tardo-antico*, Napoli: Liguori, 1986.
- Dorez, L., *La canzone delle virtù e delle scienze di Bartolomeo di Bartoli da Bologna, testo inedito del secolo XV tratto dal ms. originale del Museo Condé*, Bergamo: Istituto Italiano d'Arti Grafiche Editore, 1904.

- Dutilh Novaes, C., *Formalizing Medieval Logic: Suppositio, Consequentia and Obligationes*, Berlin: Springer, 2007.
- Ebbesen, S., "Logica docens/utens", in *Historisches Wörterbuch der Philosophie*, 5 (1980), p. 353–355.
- *Commentators and Commentaries on Aristotle's Sophistici Elenchi: A study of post-Aristotelian Ancient and Medieval writings on Fallacies*, Leiden: Brill, 1981.
- "Early Supposition Theory (12th–13th centuries)", in *Histoire Épistémologie Langage*, 3/2 (1981), pp. 35–48.
- "Analyzing Syllogisms or Anonymus Aurelianensis III – the (presumably) Earliest Extant Latin commentary on the *Prior Analytics*, and its Greek model", in *Cahiers de l'institut du moyen-âge grec et latin*, 37 (1981), pp. 1–20.
- "Proof and its Limits According to Buridan, Summulae 8", in Z. Kaluza–P. Vignaux (eds.), *Preuve et raisons à l'Université de Paris: Logique, ontologie et théologie au XIVe siècle*, Paris: Vrin, 1984, pp. 97–110.
- "Termini accidentales concreti. Texts from the Late 13th Century", in *Cahiers de l'Institut du Moyen Âge grec et latin*, 53 (1986), pp. 37–150.
- "Is Logic Theoretical or Practical Knowledge?", in J. Biard (ed.), *Itinéraires d'Albert de Saxe Paris – Vienne au XIVe Siècle. Actes du Colloque organisé le 18–22 juin 1990 dans le cadre des activités de l'URA 1085 du CRNS à l'occasion du 600e anniversaire de la mort d'Albert de Saxe*, Paris: Librairie Philosophique J. Vrin, 1991, pp. 267–276.
- "The Theory of 'loci' in Antiquity and the Middle Ages", in Jacobi (ed.), *Argumentationstheorie*, pp. 15–39.
- "Medieval Latin Glosses and Commentaries on Aristotelian Logical Texts of the Twelfth and Thirteenth Centuries", in C. Burnett, *Glosses and Commentaries on Aristotelian Logical Texts: The Syriac, Arabic and Medieval Latin traditions*, London: Warburg Institute, 1993 pp. 129–177.
- "Radulphus Brito. The Last of the Great Arts Masters. Or: Philosophy and Freedom", in J. A. Aertsen–A. Speer (eds.), *Geistesleben im 13. Jahrhundert*, Berlin: De Gruyter, 2000, pp. 231–251.
- "Boethius of Dacia: science is a serious game", in *Theoria* 66, (2000), pp. 145–158.
- "The Man who Loved Every: Boethius of Dacia on Logic and Metaphysics," in *The Modern Schoolman*, 82 (2005), pp. 235–250.
- Ebbesen, S.– Friedman, R. L. (eds.), *Medieval Analyses in Language and Cognition: Acts of the Symposium 'the Copenhagen School of Medieval Philosophy', January 10–13, 1996*, Copenhagen: Det Kongelige Danske Videnskabernes Selskab, 1999.
- Eherle, F., *Der Sentenzenkommentar des Peter von Candia des Pisaner Papstes Alexanders V. Ein Beitrag zur Scheidung der Schulen in der Scholastik des vierzehnten Jahrhunderts und zur Geschichte des Wegestreits*, Münster in Westf.: Aschendorff Verlag, 1925.

- Evans, M., "Allegorical Women and Practical Men. The iconography of the *Artes* reconsidered", in *Studies in Church History. Subsidia*, vol. 1 Jan. 1978, pp. 305–329.
- Fletcher, J. M., "The teaching of Arts at Oxford, 1400–1520", in *Paedagogica Historica*, VII,1–2 (1967), pp. 417–454.
- Franchini, R., *Le origini della dialettica*, Napoli: Giannini, 1962.
- Franklin, J., *The Science of Conjecture*, Baltimore, MD: Johns Hopkins University Press, 2001.
- Frede, M., *Die stoische Logik*, Göttingen: Vandenhoeck & Ruprech, 1974.
- "The Endoxon Mystique: What Endoxa are and What They are Not", in *Oxford Studies in Ancient Philosophy*, 43 (2012), pp. 185–215.
- Fried, J., *Dialektik und Rhetorik im früheren und hohen Mittelalter. Rezeption, Überlieferung und gesellschaftliche Wirkung antiker Gelehrsamkeit, vornehmlich im 9. Und 12. Jh.*, München: Oldenburg, 1997.
- Gabriel, A. L., "'Via antiqua' and 'via moderna' and the Migration of Paris Students and Masters to the German Universities in the Fifteenth Century", in A. Zimmermann (ed.), *Antiqui und Moderni. Traditionsbewußtsein und Fortschrittsbewußtsein im spätern Mittelalter*, Berlin–New York: Walter de Gruyter, 1974, pp. 439–483.
- Garin, E., "La dialettica dal secolo XII ai principi dell'età moderna", in *Rivista di Filosofia*, 99/2 (1958), pp. 228–253 (repr. in *L'età nuova. Ricerche di storia della cultura dal XII al XVI secolo*, Napoli: Morano Editore, 1969, pp. 43–79).
- Gasparri, G., *Étienne Chauvin (1640–1725) and his Lexicon Philosophicum*, Hildesheim–Zürich–New York: Georg Olms Verlag, 2016.
- Germann, N., "Logik zwischen 'Kunst' und 'Wissenschaft'. Avicenna zum Status der Logik in seiner Isagoge", in *Recherches de Théologie et Philosophie Médiévales*, 75/1 (2008), pp. 1–32.
- Geudens, C.–Masolini, S., "Teaching Aristotle at the Louvain Faculty of Arts, 1425–1500: General Regulations and Handwritten Testimonies", in *Rivista di Filosofia Neo-Scolastica*, 108/4 (2016), pp. 813–844.
- Gibbs, M.–McConnell, W., *Der Welsche Gast (The Italian Guest)*, Kalamazoo: Medieval Institute, 2009.
- Gibson, S., *Statuta Antiqua Universitatis Oxoniensis*, Oxford: Clarendon Press, 1931.
- Gillies, D., *Philosophical Theories of Probability*, London: Ashgate, 2000.
- Goddu, A., *Copernicus and the Aristotelian Tradition: Education, Reading, and Philosophy in Copernicus' Path to Heliocentrism*, Leiden: Brill, 2010.
- Gombrich, E. H., "Botticelli's Mythologies: A Study in the Neoplatonic Symbolism of his Circle", *Journal of the Warburg and Courtauld Institutes*, 8 (1945), pp. 7–60.
- Gourinat, J.-B., "La postérité de la classification aristotélicienne des syllogismes", in Brumberg–Chaumont (ed.), *Ad notitiam ignoti*, pp. 63–115.

- Gardeil, A., "La 'certitude probable'", in *Revue des sciences philosophiques et théologiques*, 5 (1911), pp. 237–485.
- Grabmann, M., *Die Geschichte der scholastischen Methode*, 2 voll., Freiburg i. B.: Herder 1909.
- *Die Aristoteleskommentare des Simon von Faversham: Handschriftliche Mitteilungen*, Munich: Verlag der Bayerischen Akademie der Wissenschaften, 1933.
 - "Ungedruckte lateinische Kommentare zur aristotelischen Topik aus dem 13. Jahrhundert", in *Mittelalterlichen Geistesleben*, München: M. Hüber, 1956, vol. 3, pp. 142–157.
 - "Adenulf von Anagni, Propst von Saint-Omer (†1290). Ein Freund und Schüler des hl. Thomas von Aquin", in *Mittelalterlichen Geistesleben*, vol. 3, pp. 306–322.
- Grant, E., *A source Book in Medieval Science*, Cambridge (Mass.): Harvard University Press, 1974.
- Green-Pedersen, N. J., "On the interpretation of Aristotle's Topics in the thirteenth century", in *Cahiers de l'Institut du Moyen-Age Grec et Latin*, 9 (1973), pp. 1–46.
- *The Tradition of the Topics in the Middle Ages. The Commentaries on Aristotle's and Boethius' 'Topics'*, München–Wien: Philosophia Verlag, 1984.
- Grellard, C., "Science et opinion dans le *Quaestiones super Analyticorum Posteriorum* de Jean Buridan", in J. Biard, *Raison et démonstration. Les commentaires médiévaux sur les Seconds Analytiques*, Turnhout: Brepols, 2015, pp. 131–150.
- Griffiths, F. J., *The Garden of Delights: Reform and Renaissance for Women in the Twelfth Century*, Philadelphia: University of Pennsylvania Press, 2007.
- Grignaschi, M., "Les traductions latines des ouvrages de la logique arabe et l'abrégé d'Alfarabi", in *Archives d'Histoire Doctrinale et Littéraire du Moyen Âge*, 39 (1972), pp. 41–107.
- Grossi, I. P., "'Arti' e 'Scienze' nel 'Trionfo di s. Tommaso' di Andrea di Bonaiuto. Ipotesi di interpretazione", *Memorie domenicane*, n.s., 8–9 (1977–1978), pp. 341–353.
- Hackett, M. B., *The Original Statutes of Cambridge University. The text and its history*, Cambridge: Cambridge University Press, 1970.
- Hacking, I., *The Emergence of Probability: A Philosophical Study of Early Ideas about Probability, Induction, and Statistical Inference*, Cambridge: Cambridge University Press, 1975.
- Hadot, I., *Arts libéraux et philosophie dans la pensée antique. Contribution à l'histoire de l'éducation et de la culture dans l'Antiquité*, Paris: Vrin, 2005².
- Hald, A., *A History of Probability and Statistics and Their Applications before 1750*, New York: Wiley, 2003.

- Hasnawi, A., "Topic and Analysis: The Arabic Tradition", in R. W. Sharples, *Whose Aristotle? Whose Aristotelianism?*, Aldershot: Ashgate, 2001, pp. 28–62.
- "Topique et syllogistique: la tradition arabe (al-Farabi et Averroès)", in Biard–Mariani-Zini, *Les lieux*, pp. 191–226.
- Heydenreich, L. H., "Dialektik", in *Reallexikon zur deutschen Kunstgeschichte*, Stuttgart: Druckenmüller 1954, vol. 3, pp. 1389–90.
- Hoenen, M. J. F. M., "The *Reparationes librorum totius naturalis philosophiae* (Cologne 1494) as a Source for the Late Medieval Debates between Albertistae and Thomistae", in *Documenti e studi sulla tradizione filosofica medievale*, 4 (1993), pp. 307–344.
- "Ars artium und scientia scientiarum. Logik an den mittelalterlichen Universitäten von Paris und im Alten Reich", in R. C. Schwinges (ed.), *Artisten und Philosophen. Wissenschafts- und Wirkungsgeschichte einer Fakultät vom 13. bis zum 19. Jahrhundert*, Basel: Schwabe & Co., 1999, pp. 63–82.
- "Late medieval schools of thought in the mirror of university textbooks: the *Promptuarium argumentorum* (Cologne 1492)", in Hoenen–Schneider–Wieland (eds.), *Philosophy and Learning*, pp. 329–369.
- "*Via antiqua and Via moderna* in the fifteenth century: doctrinal, institutional, and church political factors in the *Wegestreit*", in R. L. Friedman–L. O. Nielsen (eds.), *The medieval heritage in early and modern metaphysics and modal theory, 1400–1700*, Dordrecht: Springer, 2003, pp. 9–33.
- "From Natural Thinking to Scientific Reasoning: Concepts of *logica naturalis* and *logica artificialis* in Late-Medieval and Early-Modern Thought", in *Bulletin de philosophie médiévale*, 52 (2010), pp. 81–116.
- Hoenen, M. J. F.–Schneider, J. H. J.–Wieland, G. (eds.), *Philosophy and learning: universities in the Middle Ages*, Leiden–New York–Köln: E. J. Brill, 1995.
- Höltgen, K. J., "Clever dogs and nimble spaniels: on the iconography of logic, invention and imagination", in *Explorations in Renaissance culture*, 24 (1998), pp. 1–36.
- Hülser, K., "The topical syllogism and Stoic logic", in Biard–Mariani-Zini, *Les lieux*, pp. 93–118.
- Irwin, T., *Aristotle's First Principles*, Oxford: Clarendon Press, 1988.
- Iwakuma, Y., "The Division of Philosophy and the Place of the Trivium From the 9th to the mid-12th Centuries", in Ebbesen–Friedman (eds.), *Medieval Analyses*, pp. 165–190.
- Jacobi, K., *Argumentationstheorie: Scholastische Forschungen zu den logischen und semantischen Regeln korrekten Folgerns*, Leiden: Brill, 1993.
- "Dialectica est ars artium, scientia scientiarum", in I. Craemer–Ruegenberg–A. Speer (eds.), *Scientia und Ars im Hoch- und Spätmittelalter*, Berlin–New York: Walter de Gruyter, 1994, vol. 1, pp. 307–328.

- Kaluza, Z., *Les querelles doctrinales à Paris. Nominalistes et Réalistes aux confins du XIVe et du XVe siècles*, Bergamo: Pierluigi Lubrina, 1988.
- “Les débuts de l’Albertisme tardif (Paris et Cologne)” in M.J.F.M. Hoenen-A. De Libera (eds.), *Albertus Magnus und der Albertismus: Deutsche philosophische Kultur des Mittelalters*, Leiden–New York–Köln: Brill, 1995, pp. 207–295.
 - “La crise des années 1474–1482: l’interdiction du nominalisme par Louis XI”, in Hoenen-Schneider-Wieland (eds.), *Philosophy and learning*, pp. 293–327.
 - “Les étapes d’une controverse. Les nominalistes et les réalistes parisiens de 1339 à 1482”, in A. Le Boulluec (ed.), *La controverse religieuse et ses formes*, Paris: Cerf, 1995, pp. 297–317.
- Kant, I., *Critique of Pure Reason*, tr. by P. Guyer-A. W. Wood, Cambridge: Cambridge University Press, 1998.
- Kantola, I., *Probability and Moral Uncertainty in Late Medieval and Early Modern Times*, Helsinki: Luther-Agricola Society, 1994.
- Karbowsky, J., “Complexity and Progression in Aristotle’s Treatment of Endoxa in the *Topics*”, in *Ancient Philosophy*, 35 (2015), pp. 75–96.
- Karger, E., “A Buridanian response to a fourteenth century skeptical argument and its rebuttal by a new argument in the early sixteenth century”, in H. Lagerlund (ed.), *Rethinking the History of Skepticism: The Missing Medieval Background*, Leiden–Boston: E.J. Brill, 2010, pp. 215–231.
- Katzenellenbogen, A., *The Sculptural Programs of Chartres Cathedral. Christ, Mary, Ecclesia*, New York: W. W. Norton & Co., 1964.
- “The Representation of the Seven Liberal Arts”, in M. Clagett-G. Post-R. Reynolds (eds.), *Twelfth-Century Europe and the Foundations of Modern Society*, Wisconsin–Madison: University of Wisconsin Press, 1966, pp. 39–55.
- Ker, N. R., *Medieval Libraries of Great Britain: A List of Surviving Books*, The Royal Historical Society: London, 1964².
- King, P., “Consequence as Inference: Mediaeval Proof Theory 1300–1350”, in M. Yrjönsuuri (ed.), *Medieval Formal Logic: Obligations, Insolubles, and Consequences*, Dordrecht–Boston–London: Kluwer Academic Publishers, 2001, pp. 117–145.
- Klemm, E., “Artes liberales und antike Autoren in der Aldersbacher Sammelhandschrift Clm 2599”, in *Zeitschrift fuer Kunstgeschichte*, 41 (1978), pp. 1–15.
- *Die illuminierten Handschriften des 13. Jahrhunderts deutscher Herkunft in der Bayerischen Staatsbibliothek*, Wiesbaden: Reichert, 1998.
- Klibansky, R., “The Rock of Parmenides: Medieval Views on the Origin of Dialectic”, in *Medieval and Renaissance Studies*, I, 2 (1943), pp. 178–186.
- Klima, G., “The Changing Role of *Entia Rationis* in Mediaeval Semantics and Ontology”, in *Synthese*, 96/1 (1993), pp. 25–59.
- *John Buridan*, Oxford: Oxford University Press, 2009.

- Knebel, S., *Wille, Würfel und Wahrscheinlichkeit*, Hamburg: Meiner, 2000.
- “Wahrscheinlichkeit, III. Scholastik”, in J. Ritter et al. (eds.), *Historisches Wörterbuch der Philosophie* XII, Basel: Schwabe, 2004, pp. 252–265.
- Kneepkens, C. H., “How to prepare for a BA in the Late Middle Ages: Reparationes or Study Aids for Logic”, in L. Cesalli–N. Germann– M. J. F. M. Hoenen (eds.), *University, council, city. Intellectual Culture on the Rhine (1300–1550)*, Turnhout: Brepols, 2007, pp. 63–95.
- Knipp, D., “Medieval Visual Images of Plato”, in S. Gersh–M. J. F. M. Hoenen (eds.), *The Platonic Tradition in the Middle Ages. A Doxographic Approach*, Berlin–NewYork: de Gruyter, 2002, pp. 373–413.
- Kretzmann, N., “Incipit/Desinit”, in P. Machamer–R. Turnbull (eds.), *Motion and Time, Space and Matter: Interrelations in the History of Philosophy and Science*, Columbus: Ohio State University Press, 1976, pp. 101–136.
- Lafleur, C., *Quatre introductions à la philosophie au XIIIe siècle: textes critiques et études historique*, Montreal: Institut d’Etudes médiévales, 1988.
- Lafleur, C., “Logic in the Barcelona Compendium (With special reference to Aristotle’s *Topics* and *Sophistici Elenchi*”, in Jacobi, *Argumentationstheorie*, pp. 81–98.
- Lafleur C.–Carrier, J., *L’enseignement de la philosophie au XIII^e siècle. Autour du “Guide de l’étudiant” du ms. Ripoll 109*, Turnhout: Brepols, 1997.
- Lawn, B., *Rise and Decline of the Scholastic “Quaestio disputata”: With Special Emphasis on Its Use in the Teaching of Medicine and Science*, Leiden: E. J. Brill, 1993.
- Leader, D. R., *A History of the University of Cambridge*, Cambridge: Cambridge University Press, 1988, vol., pp. 89–138.
- Leff, G., *Paris and Oxford Universities in the thirteenth and fourteenth centuries. An Institutional and Intellectual History*, R. E. Krieger: New York, 1975.
- Lewry, O., “Boethian Logic in the Medieval West”, in M. T. Gibson (ed.), *Boethius: His life, Thought and Influence*, Oxford: Blackwell, 1981, pp. 90–134.
- Lines, D., “Sources and Authorities for Moral Philosophy in the Italian Renaissance: Thomas Aquinas and Jean Buridan on Aristotle’s *Ethics*”, in J. Kraye–R. Saarinen (eds.), *Moral Philosophy on the Threshold of Modernity*, Dordrecht: Springer, 2005, pp. 7–29.
- Lohr, C., “Medieval Latin Aristotle Commentaries”, in *Traditio*, 23 (1967), p. 313–413; 24 (1968), p. 149–245; 26 (1970), pp. 136–216; 27 (1971), pp. 251–351; 28 (1972), pp. 282–396; 29 (1973), pp. 94–197; 30 (1974), pp. 119–144.
- “Problems of Authorship concerning some Medieval Aristotle Commentaries,” in *Bulletin de philosophie médiévale*, 13 (1971), pp. 131–36.
- Lutz, C. E., “Remigius’ ideas on the classification of the seven liberal Arts”, *Traditio*, 12 (1956), pp. 56–86.

- Maier, A., "Ein Beitrag zur Geschichte der italienischen Averroismus im 14. Jahrhundert," in *Quellen und Forschungen aus italienischen Archiven und Bibliotheken*, 33 (1944), pp. 136–154.
- Magnano, F., "Boethius: the Division of Logic", in Brumberg–Chaumont (ed.), *Ad notitiam ignoti*, pp. 141–171.
- "Il *De topicis differentiis* di Severino Boezio", Palermo: Officina di Studi Medievali, 2014.
- Malagola, C., *Statuti delle Università e dei Collegi dello Studio Bolognese*, Bologna: N. Zanichelli, 1888.
- Mâle, E., *L'art religieux du XIIIe siècle; étude sur l'iconographie du moyen âge et sur ses sources d'inspiration*, Paris: Leroux, 1898 (Eng. tr. *Religious Art in France of the Thirteenth Century*, Mineola, N.Y.: Dover Publications, 2000).
- Mancini, I., "De Profundis per la dialettica", in *Id.*, *Frammento su Dio*, Brescia: Morcelliana, 2000.
- Mansion, S., *Aristote et les problèmes de méthode: communications présentées au Symposium Aristotelicum tenu à Louvain du 24 août au 1er septembre 1960*, Louvain: Publications Universitaires de Louvain, 1961.
- Marenbon, J., *From the Circle of Alcuin to the School of Auxerre. Logic, Theology and Philosophy in the Early Middle Ages*, Cambridge: Cambridge University Press, 1981.
- *Boethius (Great medieval thinkers)*, Oxford: Oxford University Press, 2003.
- "Logic at the Turn of the Twelfth Century: a synthesis", in I. Rosier-Catach (ed.), *Arts du langage et théologie aux confins des XIe–XIIe siècle: conditions et enjeux d'une mutation*, Turnhout: Brepols, 2011, pp. 181–217.
- Markowski, M., *Burydanizm w polsce w okresie przedkopernikanskim. Studium z Historii filozofii i nauk ścisłych na uniwersytecie krakowskim w XV wieku*, Wrocław–Warszawa–Kraków: Zakład Narodowy im. Ossolińskich, 1971.
- "Logik und Semantik im 15. Jahrhundert an der Universität Kraków", in *Medievalia philosophica polonorum*, 21 (1975), pp. 73–80.
- *Logika*, Wrocław: Zakład Narodowy im. Ossolińskich, 1975.
- *Metodologia Nauk*, Wrocław: Zakład Narodowy im. Ossolińskich, 1976.
- "Albert und der Albertismus in Krakau", in A. Zimmermann (ed.), *Albert der Grosse. Seine Zeit, sein Werk, seine Wirkung*, Berlin–New York: de Gruyter, 1981, pp. 177–192.
- "Formy argumentacji w teoretycznych i praktycznych dyscyplinach filozoficznych na Uniwersytecie Krakowskim w XV wieku" in *Biuletyn Biblioteki Jagiellońskiej*, 41 (1991), pp. 27–61.
- "Dialektische und rhetorische Argumentation an der krakauer Universität im 15. Jahrhundert", in Jacobi, *Argumentationstheorie*, pp. 577–587.

- Markowski, M.-Wlodej, S. (eds.), *Repertorium commentariorum medii aevi in Aristotelem Latinorum quae in Bibliotheca Jagellonica Cracoviae asservantur*, Wrocław: Zakład narodowy im. Ossolinski, 1974.
- Marmo, C., "Suspicio: A Key Word to the Significance of Aristotle's Rhetoric in Thirteenth Century Scholasticism", in *Cahiers de l'Institut du Moyen Âge Grec et Latin*, 60 (1990), pp. 145–190.
- "Anonymi Philosophia "Sicut dicitur ab Aristotile". A Parisian Prologue to Porphyry", in *Cahiers de l'Institut du Moyen-Âge Grec et Latin*, 61 (1991), pp. 140–146.
 - *Semiotica e linguaggio nella Scolastica: Parigi, Bologna, Erfurt 1270–1330. La semiotica dei Modisti*, Roma: Istituto Storico Italiano per il Medio Evo, 1994.
 - "The Semantics of the Modistae," in Ebbesen–Friedman (eds.), *Medieval Analyses*, pp. 83–104.
 - "Types of Opposition in the Postpraedicamenta in Thirteenth-Century Commentaries", in J. Biard–I. Rosier-Catach (eds.), *La tradition médiévale des catégories (XIIe–XVe siècles)*, Leuven: Peeters, 2003, pp. 85–103.
 - "Scotus on Supposition," in E. P. Bos (ed.), *Medieval Supposition Theory Revisited*, Leiden–Boston: Brill, 2013, pp. 233–257.
- Masi, M., "A Newberry Diagram of the Liberal Arts", *Gesta*, 11, n. 2 (1972), pp. 52–56.
- Mates, B., *Stoic Logic*, Berkeley–Los Angeles: University of California Press, 1961.
- Meier, C., "Die Rezeption des Anticlaudianus Alans von Lille in Textkommentierung und Illustration", in C. Meier–U. Ruberg (eds.), *Text und Bild: Aspekte des Zusammenwirkens zweier Künste im Mittelalter und früherer Neuzeit*, Wiesbaden: Reichert, 1980, pp. 408–549.
- Menzel, W., *Christliche Symbolik*, Regensburg: Manz, 1856.
- Michalski, K., *La philosophie au XIV^e siècle*, Frankfurt: Minerva, 1969.
- Michael, B., *Johannes Buridan: Studien zu seinem Leben, seinen Werken und zur Rezeption seiner Theorien in Europa des späten Mittelalters*, PhD diss., University of Berlin, 1985.
- Minio-Paluello, L., "The "Ars disserendi" of Adam Balsamiensis "Parvipontanus"", *Mediaeval and Renaissance Studies*, III (1954), pp. 116–169.
- *Twelfth Century Logic. Texts and Studies, I, Adam Balsamiensis Parvipontani Ars disserendi (Dialectica Alexandri)*, Roma: Ed. di Storia e Letteratura, 1956.
 - "The Text of Aristotle's Topics and Elenchi: the Latin Tradition," in *The Classical quarterly*, N.S.V. 1955 (49), pp. 108–118.
 - "Note sull'Aristotele Latino Medievale: XIII. Traduzioni 'perdute' dei Primi Analitici e dei Topici nel codice di Bologna Univ. 4228 del XII secolo", in *Rivista di filosofia neoscolastica*, 52 (1960), pp. 29–45.
 - "Note sull'Aristotele latino medievale", in *Rivista di filosofia neo-scolastica*, 52 (1969), pp. 29–45.

- “Nuovi impulsi allo studio della logica: la seconda fase della riscoperta di Aristotele e di Boezio”, in *La scuola nell’Occidente Latino dell’Alto Medioevo*. 15–21 Aprile 1971, Spoleto: Centro Italiano di Studi per l’Alto Medioevo, 1972, vol. 2, pp. 743–766.
- Moody, E. A., *Truth and Consequence in Medieval Logic*, New York–Amsterdam: North-Holland, 1953.
- Mora Marquez, A. M., “Boethius of Dacia and Radulphus Brito on the Universal Sign “Omnis””, in *Logica Universalis*, 9/2 (2015), pp. 193–211.
- Nuchelmans, G., “Philologia et son mariage avec Mercure jusqu’à la fin du XIIe siècle”, *Latomus*, 16 (1957), pp. 84–107.
- Ochsenbein, P., “Das Compendium Anticlaudianum. Eine neu entdeckte Vorlage Heinrichs von Neustadt”, in *Zeitschrift für deutsches Altertum und deutsche Literatur* 98 (1969), pp. 80–109.
- Orlandelli, G., *sub voce* “Bartoli, Bartolomeo de’”, in *Dizionario Biografico degli Italiani*, Istituto dell’Enciclopedia italiana, Fondazione Treccani: Roma 1964, vol. 6, pp. 559–560.
- Ott, L., “Die Wissenschaftslehre des Adenulf von Anagni”, in *Mélanges offerts à Étienne Gilson de l’Académie Française*, Toronto–Paris: Pontifical Institute of Mediaeval Studies–Librairie Philosophique J. Vrin, 1959.
- Owen, G. E. L., “Tithenai Ta Phainomena”, in S. Mansion, *Aristote et les problèmes de méthode: communications présentées au Symposium Aristotelicum tenu à Louvain du 24 août au 1^{er} septembre 1960*, Louvain: Publications Universitaires de Louvain, 1961, pp. 83–103.
- *Aristotle on Dialectic: The Topics. Proceedings of the Third Symposium Aristotelicum*, Oxford: Clarendon Press, 1968.
- Palmer, W. E., *Images of Knowledge: The Seven Liberal Arts and Their Representations in Medieval and Renaissance Art*, Ph.D. diss., California State University, Dominguez Hills, 2002.
- Panofsky, E., “Iconography and Iconology: An Introduction to the Study of Renaissance Art”, in Id., *Meaning in the visual Arts. Papers in and on Art History*, Garden City (N.Y.): Doubleday Anchor Books, 1955, pp. 26–54 (originally in Id., *Studies in Iconology: Humanistic Themes in the Art of the Renaissance*, Oxford: Oxford University Press, 1939).
- Pasnau, R., “Medieval Social Epistemology: Scientia for Mere Mortals”, in *Episteme*, 7 (2010), pp. 23–41.
- Perini, D., *Bibliographia Augustiniana, Scriptores Itali*, Firenze: Tipografia Sordomuti, 1929–1938.
- Piltz, A., *Stadium Upsalense. Specimens of the Oldest Lecture Notes taken in the Mediaeval University of Uppsala*, Uppsala: Inst. f. Klassiska Språk, 1977.
- Pinborg, J., “Zur Philosophie des Boethius de Dacia. Ein Überblick,” in *Studia Mediewistyczne*, 15 (1974,) pp. 165–185.

- “Radulphus Brito’s sophism on second intentions”, in *Vivarium*, 12 (1975), pp. 119–152.
 - “English Logic before Ockham,” in *Synthese*, 40/1 (1979), pp. 19–42.
 - “Die Logik der Modistae” in *Studia Mediewistyczne*, 16 (1975), pp. 39–97, repr. in *Id.*, *Medieval Semantics. Selected Studies on Medieval Logic and Grammar*, ed. by S. Ebbesen, London: Variorum, 1984.
 - *Logica e semantica nel Medioevo*, Torino: Bollati Boringhieri, 1984.
- Pini, G., “Duns Scotus’ Commentary on the *Topics*: new light on his philosophical teaching”, in *Archives d’Histoire doctrinale et littéraire du Moyen Âge*, 66 (1999), pp. 225–243.
- Ripa, C., *Iconologia ovvero descrizione dell’imagini universali cavate dall’antichità et da altri luoghi da Cesare Ripa Perugino*, Romae: appresso Lepido Facii, 1593 (Fr. ed. *Iconologie ou explication nouvelle de plusieurs images, emblemes, et autres figures hyeroglyphiques des Vertus, des Vices, des Arts, des Sciences, des Causes naturelles, des Humeurs differents, et des Passions humaines*, Paris 1643).
- Robiglio, A. A., “The Thinker as a Noble Man (*bene natus*) and Preliminary Remarks on the Medieval Concepts of Nobility”, in *Vivarium*, 44 (2006), pp. 205–247.
- Roos, H., “Le *Trivium* à l’université au XIIIe siècle”, in *Arts libéraux et philosophie au Moyen Age*, Montréal: Université de Montréal. Institut d’études médiévales, 1969 pp. 193–197.
- Rosier-Catach, I., “Grammar”, in R. Pasnau (ed.), *The Cambridge History of Medieval Philosophy*, Cambridge: Cambridge University Press, 2010.
- Rossi, P. B., “Robert Grosseteste and the Object of Scientific Knowledge”, in J. McEvoy (ed.), *Robert Grosseteste: New Perspectives on His Thought and Scholarship*, Turnhout: Brepols, 1995, pp. 53–75.
- Rubinelli, S., *Ars Topica. The Classical Technique of Constructing Arguments from Aristotle to Cicero*, Dordrecht: Springer, 2009.
- Rutten, P., “Secundum processum et mentem Versoris: John Versor and His Relation to the Schools of Thought Reconsidered”, in *Vivarium*, 43 (2005), pp. 292–336.
- Saenger, E., “Das Lobgedicht auf König Robert von Anjou. Ein Beitrag zur Kunst- und Geistesgeschichte des Trecento”, *Jahrbuch der kunsthistorischen Sammlungen in Wien*, 84 (1988), pp. 7–91.
- Sichirollo, L., *Dialettica*, Milano: Istituto Editoriale Internazionale, 1973.
- Sheridan, J. J., “The Seven Liberal Arts in Alan of Lille and Peter of Compostella”, *Mediaeval Studies*, 35 (1973), pp. 27–37.
- Schuessler, R., “Probability in Medieval and Renaissance Philosophy”, *The Stanford Encyclopedia of Philosophy* (Winter 2016 Edition), ed. by E. N. Zalta, URL = <<https://plato.stanford.edu/archives/win2016/entries/probability-medieval-renaissance/>>.

- Schmidt, R. W., *The Domain of Logic According to Saint Thomas Aquinas*, Martinus Nijhoff: The Hague, 1966.
- Schonfeld, V., "Sebald Beham and The Iconography of the Liberal Arts", in P. Earenfight et al. (eds.), *Letters & Lines: Text and Image in Northern Renaissance & Baroque Prints*, Carlisle, Pa.: The Trout Gallery, Dickinson College, 2014, pp. 49–59.
- Schum, W., *Beschreibendes Verzeichniß der Amplonianischen Handschriften-Sammlung zu Erfurt*, Berlin: Weidmann, 1887.
- Slomkowski, P., *Aristotle's Topics*, Leiden: Brill, 1997.
- Smahel, F., "The Kuettenberg Decree and the Withdrawal of the German Schools from Prague in 1409: a Discussion", in *History of Universities*, 4 (1984), pp. 153–166.
- Spade, P. V., "Why Don't Mediaeval Logicians Ever Tell Us What They're Doing? Or, What Is This, A Conspiracy?" (2000), available on line: <http://pvspade.com/Logic/docs/Conspiracy.pdf>.
- "Thoughts, words, and things. An introduction to late medieval logic and semantic theory (2007)" available on line: http://pvspade.com/Logic/docs/Thoughts,%20Words%20and%20Things1_2.pdf.
- Specia, A., *Hypothetical Syllogistic and Stoic Logic*, Leiden–Boston–Köln: E.J. Brill, 2001.
- Spranzi, M., *The Art of Dialectic between Dialogue and Rhetoric: The Aristotelian Tradition*, Amsterdam: John Benjamins, 2011.
- Spruyt, J., "The Forma-Materia device in Thirteenth-Century Logic and Semantics", in *Vivarium*, 41 (2003), pp. 1–46.
- Sullivan, T., *Parisian Licentiates in Theology, A.D. 1373–1500: A Biographical Register, Vol. 2. The Secular Clergy*, Leiden: Brill, 2011.
- Sundholm, G., "'Inference versus consequence" revisited: inference, consequence, conditional, implication", in *Synthese*, 187 (2012), pp. 943–956.
- Stirnemann, P., "Bartolomeo di Bartoli: La canzone delle virtù e delle scienze", in *Enluminure Italienne: Chefs d'œuvre du Musée Condé*, Chantilly: Somogy Éditions D'Art, 2000, pp. 12–17.
- Stolz, M., *Artes-liberales-Zyklen: Formationen des Wissens im Mittelalter*, 2 vols, Tübingen 2004.
- Stump, E., *Dialectic and its Place in the Development of Medieval Logic*, Ithaca and London: Cornell University Press, 1989.
- "Dialectic and Boethius' *De topicis differentiis*", in Boethius, *De topicis differentiis*, pp. 179–204.
- Sym, M., *From Puzzles to Principles? Essays on Aristotle's Dialectic*, Lanham – Boulder – New York – Oxford: Lexington Books, 1999.

- De Tervarent, G., *Attributs et symboles dans l'art profane: Dictionnaire d'un langage perdu (1450-1600)*, Genève: Droz, 1997².
- Tewes, G.-R., *Die Bursen der Kölner Artisten-Fakultät bis zur Mitte des 16. Jahrhunderts*, Köln-Weimar-Wien: Böhlau, 1993.
- Tezmen-Siegel, J., *Die Darstellungen der septem artes liberales in der Bildenden Kunst als Rezeption der Lehrplangeschichte*, Phil. Diss. Uni. München 1983, München 1985.
- Thom, P., *Logic and Ontology in the Syllogistic of Robert Kilwardby*, Leiden: Brill, 2007.
- Thomson, R. M., *Catalogue of Medieval Manuscripts of Latin Commentaries on Aristotle in British Libraries*, Turnhout: Brepols, 2011–2013.
- Thorndike, L., *University Records and Life in the Middle Ages*, New York: Columbia University, 1944.
- Uña Juárez, A., *La filosofía del siglo XIV: context cultural de Walter Burley*, San Lorenzo del Escorial: Biblioteca "La ciudad de Dios", 1978.
- Vaccaro, G., "Filologia del testo e filologia dell'immagine nei Regia carmina di Convevevole da Prato", in *Convevevole da Prato, Regia carmina: panegirico in onore di Roberto d'Angio. Commentario*, Torino, UTET, 2004, pp. 20–38.
- Verdier, P. M., "L' iconographie des arts libéraux dans l'art du moyen âge jusqu'à la fin du quinzième siècle", in *Arts libéraux et philosophie au Moyen Age*, pp. 305–354.
- Volfing, M., *Heinrich von Mügeln: 'Der meide kranz'. A Commentary*, Tübingen: Niemeyer, 1997.
- von Bianco, F. J., *Die alte Universität Köln und die Späteren Gelehrtschulen dieser Stad*, Köln: Gehln, 1855.
- Von Moos, P., "'Was allen oder den meisten oder den Sach- kundigen richtig scheint.' Über das Fortleben des endoxon im Mittelalter", in B. Mojsich-O. Pluta, *Historia Philosophiae Medii Aevii*, vol. 2, Amsterdam: Grüner, 1991, pp. 711–743.
- "Die 'bloße' und die wahrheitsfähige Meinung im Mittelalter," in K. Hempfer-A. Traninger (eds.), *Macht Wissen Wahrheit*, Freiburg: Rombach, 2006, pp. 55–75.
- Von Perger, M., "Quaestiones libri Elenchorum: Quaestiones XVIII de fallaciis, quae 'in dictione' nuncupantur Qq. 1–3, 13–18," in *Cahiers de l'Institut du Moyen-Âge Grec et Latin*, 76 (2005), pp. 159–237.
- Walz, D., *Die historische und philosophischen Handschriften der Codices Palatini Latini in der Vatikanischen Bibliothek (Cod. Pal. Lat. 921–1078)*, Wiesbaden: Dr. Ludwig Reichert Verlag, 1999.
- Weijers, O., *Le travail intellectuel à la Faculté des arts de Paris: textes et maîtres (ca. 1200–1500)*, Turnhout: Brepols, 1994.
- "L'enseignement du trivium à la Faculté des arts de Paris: la 'quaestio'", in J. Hamesse, *Manuels, programmes de cours et techniques d'enseignement dans les*

Universités médiévales, Louvain la Neuve: Publications de l'Institut d'études médiévales, 1994, pp. 57–74.

- “Le commentaire sur les ‘Topiques’ d’Aristote attribué à Robert Kilwardby (ms. Florence, B.N.C. Conv. Soppr. B.4.1618)”, in *Documenti e Studi sulla Tradizione Filosofica Medievale*, 6 (1995), pp. 107–143, 308–310.
- “The Evolution of the Trivium in the University Teaching: The Example of the *Topics*”, in J. Van Engen (ed.), *Learning Institutionalized. Teaching in the Medieval University*, Notre Dame (Ind.): University of Notre Dame Press, 2000, pp. 43–67 (repr. in O. Weijers, *Études sur la Faculté des Arts dans les universités médiévales. Recueil d’articles*, Turnhout: Brepols, 2011, pp. 351–378).
- *La disputatio dans les facultés des arts au moyen âge*, Turnhout: Brepols, 2002.
- *In Search of the Truth. A History of Disputation Techniques from Antiquity to Early Modern Times*, Turnhout: Brepols, 2013.

Weijers, O.–Holtz, L., *L’Enseignement des disciplines à la Faculté des arts (Paris et Oxford, XIII^e–XV^e siècles)*, Turnhout: Brepols, 1997.

Weisheipl, J., “Curriculum of the Faculty of Arts at Oxford,” in *Medieval Studies*, 26 (1964), pp. 143–185.

- “Classification of the sciences in medieval thought”, in *Mediaeval Studies*, 27 (1965), pp. 54–90.
- “Developments in the Arts Curriculum at Oxford in the Early Fourteenth Century,” in *Mediaeval Studies*, 28 (1966), pp. 151–175.

Wirth, K. A., “Eine illustrierte Martianus Capella-Handschrift aus dem 13. Jahrhundert”, *Städel-jahrbuch*, ns. 2 (1969), pp. 43–74.

- “Die kolorierten Federzeichnungen im cod. 2975 der Österreichischen Nationalbibliothek. Ein Beitrag zur Ikonographie der Artes Liberales im 15. Jahrhundert”, in *Anzeiger des Germanischen Nationalmuseums*, 1979, pp. 67–110.
- “Von mittelalterlichen Bildern und Lehrfiguren im Dienste der Schule und des Unterrichts”, in B. Moeller-H. Patze-K. Stackmann (eds.), *Studien zum städtischen Bildungswesen des späten Mittelalters und der frühen Neuzeit*, Göttingen, 1989, pp. 256–370.

Wöhler, H.-U., *Dialektik in der mittelalterlichen Philosophie*, Berlin: Akademie Verlag, 2006.

Zupko, J., *John Buridan. Portrait of a 14th-Century Arts Master*, South Bend (IN): University of Notre-Dame Press, 2003.